

TENNESSEE RESERVOIR FISHERIES



STATEWIDE MANAGEMENT REPORT 2016

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Jim Pipas, and Wm. Patrick Black



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TWRA Fisheries Report No. 18-03

By

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TWRA Reservoir Fisheries Biologists

Regional Management Biologists:

Region 1: Michael Clark – Supervising Fisheries Biologist (Jackson)

Clayton Boyd – Fisheries Biologist

Reggie Wiggins – Fisheries Biologist

Region 2: Lyle Mason – Supervising Fisheries Biologist (Nashville)

Ted Alfermann – Fisheries Biologist

Jim Pipas – Supervising Fisheries Biologist (Nashville)

Jesse Taylor – Fisheries Biologist

Region 3: Mike Jolley – Supervising Fisheries Biologist (Crossville)

Brandon Ragland – Fisheries Biologist

Brian Letner – Fisheries Biologist

Chris Morton – Fisheries Biologist

Region 4: John Hammonds – Supervising Fisheries Biologist (Morristown)

Jim Negus – Fisheries Biologist

Shaun Ramsey – Fisheries Biologist

Statewide Coordination and Analysis

Fisheries Management Division (Nashville):

Wm. Patrick Black – Reservoir Fisheries Coordinator, Fisheries Statistics

Mike Bramlett – Age and Growth Analysis

Amy Adams – Administrative Support

Introduction

Fishing in reservoirs and lakes is a major source of recreation for Tennessee residents and visitors. The state contains 31 large reservoir and 1 large natural lake representing about 500,000 surface acres of water. In 2011 anglers spent \$1.1 billion on fishing related expenditures in Tennessee (U.S Department of the Interior, 2014). Proper management of fishery resources is vital to maintaining sustainability and the Tennessee Wildlife Resources Agency (TWRA) is mandated to see this is accomplished. Proper management techniques include monitoring through surveys, habitat enhancement, research, and supplemental fish stocking. Data collected in the TWRA reservoir program are maintained in a central database.

This report is a presentation of survey statistics and management summaries for reservoirs managed by TWRA. It is intended that the report be used by biologists, administrators, and anglers as a snapshot of the status of fisheries throughout the state. The reported summaries are organized by TWRA regions, individual reservoirs within the regions, and individual species within each reservoir. The data summaries are organized so that ten years of population statistics for a reservoir may be viewed in a single table for each species within a reservoir. This saves the need to refer back numerous years to view trends in population statistics or find the most recent survey for a given location.

Multiple summaries are presented for each species including population parameters (growth, recruitment, and mortality), size structure, condition, creel survey statistics (Black, 2015), and stocking summaries. Different sampling gears are used for different species and these are listed in the tables along with parameters. In some cases, different gears and methods are used for different species and different population parameters. Gear differences also exist for the variety of reservoirs as some gears are not as effective of some water bodies. However, standardized gears and techniques were employed in data collection as much as possible to make meaningful comparisons among reservoirs possible.

Within each reservoir section, the TWRA Regional Biologists provide a written summary to highlight issues, positive outcomes, and recommendations for that reservoir. Any recommendations are a starting point for the discussion of needs, harvest restrictions, and stocking requests and should not be construed as “what will be done”. Recommendation related to allowable size and harvest limits are discussed extensively among TWRA staff and submitted for public review prior being voted on by the Tennessee Fish and Wildlife Commission in October of each year

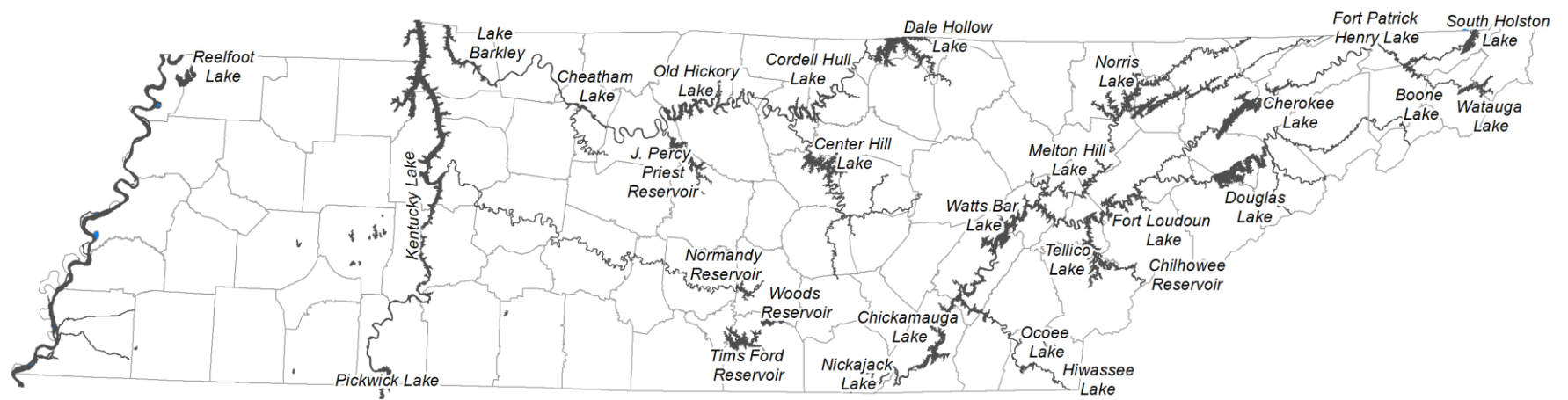


Figure 1 Distribution of major reservoirs (including Reelfoot Lake) in Tennessee.

Table 1. Surface Acreage of Tennessee Reservoirs Greater Than 500 Acres. Reelfoot Lake is included.

| Reservoir | Acreage in Tennessee | Total Acres | Data Source* |
|-------------------|----------------------|-------------|--------------|
| Barkley | 18,300 | 57,420 | 3 |
| Boone | 4,520 | | 1 |
| Caulderwood | 541 | | 1 |
| Center Hill | 18,220 | | 2 |
| Cheatham | 7,450 | | 2 |
| Cherokee | 30,300 | | 1 |
| Chickamauga | 34,500 | | 1 |
| Chilhowee | 1,750 | | 1 |
| Cordell Hull | 11,960 | | 2 |
| Dale Hollow | 23,200 | 27,700 | 3 |
| Douglas | 30,600 | | 1 |
| Ft. Loudoun | 14,600 | | 1 |
| Ft. Patrick Henry | 872 | | 1 |
| Great Falls | 3,080 | | 1 |
| Guntersville | 1,156 | 67,900 | 3 |
| John Sevier | 786 | | 3 |
| J. Percy Priest | 14,200 | | 2 |
| Kentucky | 108,217 | 160,300 | 3 |
| Melton Hill | 5,690 | | 1 |
| Nickajack | 10,370 | | 1 |
| Normandy | 3,048 | | 3 |
| Norris | 34,200 | | 1 |
| Old Hickory | 22,500 | | 2 |
| Parksville | 1,890 | | 1 |
| Pickwick | 6,159 | 43,100 | 3 |
| Reelfoot L. | 10,427 | | 3 |
| South Holston | 6,336 | 7,580 | 3 |
| Tellico | 16,056 | | 3 |
| Tims Ford | 10,600 | | 1 |
| Watauga | 6,430 | | 1 |
| Watts Bar | 39,000 | | 1 |
| Woods | 3,660 | | 3 |
| Total | 500,618 | | |

*1. TVA 1980

*2. U.S. Army Corps
of Engineers 1978

*4. TWRA 2006

Methods

Fishery surveys were conducted using standard methods described in *Reservoir Fisheries Assessment Guidelines* (TWRA, 1998). Gears employed for surveys included boat-mounted electrofishers, trap nets, gill nets, and larval tow nets. Uses of various gear types to monitor sport fish recruitment, mortality, growth, and density were determined at the discretion of the management biologist, and was based on the methods which historically have provided the best estimates for each parameter on a given water body. Efforts were made to distribute the sampling effort across the reservoir to provide a representative sample. Generally, black bass and adult crappie parameters were measured with electrofishing; young-of-year crappie abundance was measured with trap nets and larval tow nets; and *Percid* and *Morone* parameters were measured using gill nets. Water quality was monitored on select reservoirs where fish habitat has been limited historically during the summer months. Measurements were taken with dissolved oxygen / temperature probes at incremental depths throughout the water column.

Creel survey data were collected using the methods described in *Tennessee Statewide Creel Survey 2016 Results* (Black, 2017). Data were collected using roving surveys. Interviews were conducted on-site and face-to-face with full-time creel clerks. Standard question related to determining fishing effort, fishing success, catch rates, catch, harvest, expenditures, and sociological information were asked. Data were entered by IT staff at the TWRA central office and creel estimates and analysis were performed by the TWRA Fisheries Management Division in Nashville, TN.

Habitat enhancements were performed by regional staff and in partnership with the angling public. Fish attractors included submerged cedar and Christmas trees, stake beds, plastic fish attractors, and concrete reef balls. Shoreline stabilization was conducted largely with bald cypress plantings in fluctuation zones and on shoreline points. Aquatic macrophyte plantings and grass seeding in fluctuation zones also occurred at several reservoirs. Methods of plant establishment varied depending on location of objective in establishment.

Fishery data were recorded in the field on datasheets by hand. Data was entered into relational TWRA databases using WinFin software (J. Francis, 2001). Data were analyzed using WinFin data analysis software to produce summaries, population parameters, and indices. Regional biologists analyzed these summaries to produce the tables within this document. Original WinFin outputs and summary reports were retained by the biologists and stored in regional files. All datasets were sent to the reservoir program coordinator at the end of the survey year for incorporation into the statewide reservoir

Region 1

Barkley Reservoir - 2016

Description

Area (acres): TN: 10,350; TOTAL: 57,290 **Mean Depth (feet):** 15' **Shoreline (miles):** Total – 1,004

Counties: Stewart, Montgomery, Cheatham

Reservoir Length: Total 118 miles
Drainage: 2,343 sq. miles TN: 72 miles
 TN: 982 sq. miles

Total Fishing Effort (angler hours): 205,215

Total Value by Anglers: \$1,543,420

Summer Pool: 359 MSL (57,290 acres)

Winter Pool: 354 MSL (45,210 acres)

Tennessee Only: 359 MSL – 20,851 acres; 354 MSL – 16,276 acres

Canal connecting Kentucky and Barkley Reservoirs located at CRM 32.8. Canal= 1.75 miles in length

Management Strategies:

Striped Bass/Hybrid Striped Bass: 15" MLL, 2 fish – 1987

LMB: Creel limit reduced from 10 to 5 - 1997

15" MLL, 5 fish creel – 2001

Crappie: 10" MLL, 30 fish creel – 1997

White Bass: 30 fish creel limit – 1989

Redear Sunfish: 20 fish creel – 2008

Creel limit reduced to 15 - 2005

Sauger: 15" MLL, 15 fish creel – 1998

15" MLL, 10 fish creel - 2001

Habitat Enhancement and Monitoring

2016 – None

Angling Pressure (Angler Hours per Acre)

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------|------|------|------|------|------|------|------|------|------|------|
| Total Angler Pressure | 13.3 | 12.7 | 9.8 | NA | NA | NA | 22.2 | 15 | 16 | 19.8 |
| | 4.2 | 4.8 | 4.3 | NA | NA | NA | 6.3 | 5.3 | 7.5 | 9.1 |

Tournaments (BITE)

| | | | | | | | | | | |
|---------------------------------|------|------|------|------|------|----|--|--|--|--|
| Tournaments ^{BITE} | 2 | 2 | 2 | 2 | 2 | 0 | | | | |
| Lbs/Angler Day ^{BITE} | 3.87 | 3.73 | 3.73 | 5.54 | 5.87 | -- | | | | |
| Fish/Angler Day ^{BITE} | 1.76 | 1.5 | 1.5 | 2.2 | 2.33 | -- | | | | |
| Angler Hours ^{CREEL} | | | | | | | | | | |
| Catch Rate ^{CREEL} | | | | | | | | | | |

Value of Fishery (Trip Expenditures in Thousands)

| | | | | | | | | | | |
|------------|-------|-------|-------|----|----|----|-------|-------|-----|-------|
| Black Bass | 267.3 | 410.5 | 441.5 | NA | NA | NA | 494.4 | 920.1 | 712 | 974.6 |
|------------|-------|-------|-------|----|----|----|-------|-------|-----|-------|

Largemouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------------------|----------------|-------|-------|-------|-------|---------------|------|------|------|------|
| Spring Electro hours | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Fall Electro hours | 2.65 | 3.54 | 3.85 | 3.46 | 2.68 | 5.6 | 3.7 | 5.18 | 3.8 | 2.8 |
| Recruitment | | | | | | | | | | |
| Age-1 CPUE | 2.3 | -- | -- | 7 | 29.3 | 3.8 | -- | -- | -- | -- |
| Substock CPUE (Spring) | 3.5 | 9.5 | 24 | 8.5 | 19 | 6.5 | 11 | 17.5 | 7 | 3.5 |
| Spring Density (n) | 183 | 209 | 223 | 239 | 196 | 222 | 142 | 192 | 127 | 143 |
| PSD | 72 | 52 | 36 | 50 | 85 | 81 | 63 | 78 | 75 | 83 |
| RSD Preferred | 38 | 22 | 14 | 24 | 31 | 34 | 28 | 41 | 33 | 57 |
| CPUE | 91.5 | 104.5 | 111.5 | 119.5 | 98 | 111 | 71 | 96 | 63.5 | 71.5 |
| CPUE ≥ Stock | 88 | 95 | 87.5 | 111 | 79 | 104.5 | 60 | 78.5 | 56.5 | 68 |
| CPUE ≥ MSL (15") | 32.5 | 20.5 | 31.5 | 27 | 15 | 35.5 | 16.5 | 32 | 18.5 | 39 |
| Fall Density (n) | 179 | 378 | 378 | 429 | 275 | 438 | 307 | 352 | 299 | 158 |
| Fall Total CPUE | 70.5 | 116.5 | 78.5 | 122.6 | 106.9 | 87.5 | 80.9 | 66.7 | 80.4 | 59.2 |
| Fall CPUE Substock | 11.3 | 22.1 | 5.6 | 12.1 | 7.4 | 13.2 | 7.6 | 4.4 | 5.3 | 2.8 |
| Fall CPUE>Stock | 59.2 | 94.5 | 72.9 | 110.5 | 99.4 | 74.4 | 73.4 | 62.4 | 75.1 | 56.4 |
| Growth | | | | | | | | | | |
| Mean TL at Age-1 | 165 | -- | -- | 128 | 178 | 134 | -- | -- | -- | -- |
| Mean TL at Age-3 | 332 | -- | -- | -- | -- | 305 | -- | -- | -- | -- |
| Mortality | | | | | | | | | | |
| Total Mortality | 33% r2=0.85 | -- | -- | -- | -- | 42% r2=0.8 | -- | -- | -- | -- |
| Relative Weight (Fall) | | | | | | | | | | |
| Stock | 115 | 99 | 97 | 99 | 89 | 96 | 89 | 107 | 95 | 97 |
| Quality | 97 | 95 | 90 | 97 | 90 | 94 | 91 | 91 | 97 | 102 |
| Preferred | 100 | 97 | 107 | 95 | 93 | 96 | 94 | 98 | 96 | 96 |
| Memorable | 102 | 105 | 106 | 97 | 91 | 92 | 102 | 91 | -- | 102 |
| Trophy | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Fishing Success | | | | | | | | | | |
| Catch Rate | 1.3 | 2.01 | 1.63 | NA | NA | NA | 1.03 | 0.94 | 0.82 | 0.82 |
| Harvest Rate | 0.15 | 0.24 | 0.16 | NA | NA | NA | 0.11 | 0.1 | 0.14 | 0.14 |
| % Released | 98 | 98 | 99 | NA | NA | NA | 91 | 90 | 85 | 84 |
| Mean Weight | 1.79 | 2.58 | 2.14 | NA | NA | NA | 3.39 | 2.85 | 2.88 | 2.97 |

FISHERY FORECAST

Largemouth bass experienced good recruitment thirteen of the last seventeen years (2002, 2007, 2012, and 2016 below average) and these fish have recruited well to quality sizes. Total CPUE has exceeded 60 LMB/hour since 1991 although fluctuations have occurred in recruitment. Size structure indices showed quality fish in the population and relative stock indices exceeded the acceptable range; increased recruitment has increased stock size fish in the population and these fish recruited well to quality sizes. Recruitment levels in section 3 exceeded levels in sections 1 and 2 (1.3, 4.0, and 6.0 in Sections 1, 2, and 3, respectively, 2016; compared to 2015 - 2.7, 6.7, and 14.0 in Sections 1, 2, 3, respectively). Total catch rates were higher (62.7, 82.7, and 68.0 in Sections 1, 2, and 3, respectively; compared to 2015 - 81.3, 57.3, 46.0 in sections 1, 2, and 3, respectively) in the two most downstream sections, which differed from 2015. The density of larger fish (≥ 15 ") has increased overall and has improved over levels seen in the mid-1990's; 57% and 50% (23% and 26% - 2015) of the largemouth bass collected in the Spring and Fall, respectively, were larger than the minimum size limit (15"). Fall electrofishing surveys showed recruitment of young-of-year largemouth bass to the fall was below the 10-year average; stock size fish declined below historic levels. and Wr's were acceptable.

Anglers spent 9.1 hours per acre seeking all black bass. However, it was felt the majority of these hours were spent seeking largemouth bass since smallmouth bass and spotted bass are scarce. Catch rates were good and harvest rates were poor with over 90% of the fish caught released.

In 2016, anglers spent \$6.81 per hour seeking black bass and were willing to spend an additional 34% to fish for black bass on Barkley Reservoir. Trip expenditures exceeded the 10 year average by 180%. The total value of the black bass fishery was estimated at \$974,550, the highest in the 21st century.

MANAGEMENT RECOMMENDATIONS:

Continue with the 15-inch minimum size limit with a five fish per day creel limit.

Spotted Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Spring Electro hours | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Fall Electro hours | 2.65 | 3.54 | 3.85 | 3.46 | 2.68 | 5.6 | 3.7 | 5.18 | 3.8 | 2.8 |
| Recruitment | | | | | | | | | | |
| Age-1 CPUE | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Substock CPUE | 0 | 3 | 0 | 1 | 0 | 1.5 | 2.5 | 0 | 1 | 0.5 |
| Density | | | | | | | | | | |
| Spring Density (n) | 22 | 26 | 22 | 44 | 14 | 19 | 43 | 27 | 40 | 63 |
| PSD | 73 | 75 | 73 | 48 | 100 | 56 | 58 | 56 | 100 | 76 |
| RSD Preferred | 18 | 20 | 5 | 10 | 40 | 19 | 13 | 11 | 100 | 24 |
| CPUE | 11 | 13 | 11 | 22 | 7 | 9.5 | 21.5 | 13.5 | 20 | 31.5 |
| CPUE \geq Stock | 11 | 10 | 11 | 21 | 7 | 8 | 19 | 13.5 | 19 | 31 |
| CPUE \geq Preferred | 2 | 2 | 0.5 | 2 | 1 | 1.5 | 2.5 | 1.5 | 4.5 | 7.5 |
| Fall Density (n) | 21 | 14 | 17 | 16 | 7 | 41 | 52 | 31 | 45 | 16 |
| Fall Total CPUE | 9.2 | 3.5 | 4.3 | 4.4 | -- | 6.9 | 14.7 | 9.3 | 10.6 | 7.1 |
| Fall CPUE Substock | 1.6 | 0.2 | 1.2 | 1 | -- | 3.3 | 0.2 | 2.6 | 2.2 | 2.8 |
| Fall CPUE \geq Stock | 7.6 | 3.3 | 3.2 | 3.4 | -- | 3.6 | 14.5 | 6.7 | 8.4 | 4.3 |
| Fall CPUE \geq Preferred | 0.7 | 0.4 | 0 | 0 | -- | 0 | 0.1 | 0.2 | 0.9 | 0.8 |
| Relative Weight | | | | | | | | | | |
| Stock | 107 | 103 | 91 | 109 | -- | -- | 93 | 100 | 107 | 99 |
| Quality | 99 | 85 | 96 | 101 | -- | -- | 92 | 92 | 93 | 107 |
| Preferred | 85 | 92 | -- | -- | -- | -- | 83 | 95 | 93 | 95 |
| Memorable | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Trophy | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Fishing Success (Spotted bass only) | | | | | | | | | | |
| Relative Catch Rate | 0.02 | -- | -- | NA | -- | NA | 0.06 | 0.15 | 0.14 | 0.18 |
| Relative Harvest Rate | 0 | -- | -- | NA | -- | NA | 0 | 0 | 0 | 0 |
| % Released | 100 | -- | -- | NA | -- | NA | 94 | 99 | 98 | 98.6 |
| Mean Weight | -- | -- | -- | NA | -- | NA | 1.81 | -- | 1.16 | 2.46 |

Although spotted bass densities increased greatly in Spring and decreased in Fall sampling, catches by anglers were rare.

White Crappie

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------------------------------------------|-------|---------------------------|-------|------|------|-----------------------------|-------|------|-------|-------|
| Recruitment (Trap Net Survey) | | | | | | | | | | |
| Age-0 CPUE | -- | 2.8 | 3.1 | 5.5 | -- | 7.9 | -- | -- | -- | -- |
| Substock CPUE | 0.6 | 2.3 | 3.4 | 6.7 | 4.4 | 7.6 | 5.6 | 7.9 | 6.6 | 2.2 |
| Total CPUE | 1.6 | 3.5 | 6.1 | 9.8 | 11.8 | 10.6 | 6.7 | 9.3 | 10.1 | 6 |
| Net Nights | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 |
| n | 46 | 111 | 194 | 312 | 427 | 339 | 215 | 298 | 322 | 192 |
| Fall Density (Electrofishing Survey) | | | | | | | | | | |
| PSD | 100 | 99 | 88 | 94 | 92 | 90 | 99 | 98 | 93 | 99 |
| RSD Preferred | 87 | 80 | 41 | 69 | 78 | 66 | 85 | 86 | 74 | 60 |
| CPUE | 29.9 | 32.2 | 12.8 | 52.4 | 31.1 | 20 | 17.8 | 39.1 | 24.3 | 22.5 |
| CPUE ≥ Stock | 29.9 | 31.8 | 12.8 | 52 | 31.1 | 20 | 17.8 | 39.1 | 23.9 | 22.5 |
| CPUE ≥ MSL (10") | 29.9 | 28.6 | 5.5 | 35.8 | 24.6 | 13.8 | 14.3 | 33.3 | 10.6 | 13.1 |
| n | 78 | 114 | 51 | 190 | 98 | 119 | 93 | 199 | 97 | 75 |
| Fall Hours | 2.65 | 3.54 | 3.85 | 3.46 | 2.68 | 5.6 | 3.7 | 5.18 | 3.8 | 2.8 |
| Growth (Fall) | | | | | | | | | | |
| Mean TL at Age-0 | -- | 96 | 78 | 88 | -- | 85 | -- | -- | -- | -- |
| Mean TL at Age-2 Fall | -- | 283 | -- | -- | -- | 263 | -- | -- | -- | -- |
| Mortality | | | | | | | | | | |
| Total Mortality | -- | 33% r ² =68 | -- | -- | -- | 40% r ² =0.77 | -- | -- | -- | -- |
| Relative Weight (Fall) | | | | | | | | | | |
| Stock | -- | 111 | 197 | 94 | 90 | 112 | 99 | 122 | 90 | 108 |
| Quality | 101 | 108 | 100 | 113 | 102 | 112 | 91 | 99 | 110 | 99 |
| Preferred | 110 | 108 | 104 | 109 | 97 | 105 | 96 | 101 | 102 | 102 |
| Memorable | 102 | 102 | 102 | 106 | 96 | 99 | 94 | 99 | 96 | 100 |
| Trophy | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Angling Pressure (Angler Hours per Acre) | | | | | | | | | | |
| All Crappie | 5 | 3.6 | 2.49 | NA | NA | NA | 3.32 | 1.8 | 3.06 | 3.33 |
| Fishing Success | | | | | | | | | | |
| Crappie Catch Rate | 3 | 3.74 | 2.6 | NA | NA | NA | 1.87 | 2.02 | 2.2 | 1.32 |
| Crappie Harvest Rate | 1.8 | 2.41 | 1.46 | NA | NA | NA | 1.07 | 1.12 | 0.92 | 0.49 |
| WC % Released | 42 | 37 | 45 | NA | NA | NA | 50 | 40 | 64 | 67 |
| WC Mean Weight | 0.71 | 0.73 | 0.69 | NA | NA | NA | 0.76 | 0.78 | 0.78 | 0.78 |
| Value of Fishery (Trip Expenditures in Thousands) | | | | | | | | | | |
| All Crappie | 125.4 | 130 | 111.1 | NA | NA | NA | 153.5 | 98.8 | 154.9 | 207.1 |

FISHERY FORECAST

The white crappie population experienced poor year class strength in five of the last fourteen years (2004, 2006 – 2008, 2016; CPUE YOY crappie ≥ 3.0 equals average year class). Recruitment did not exceed the acceptable density in 2016 like it has in the previous six years. In 2016, recruitment fell to unacceptable levels in all sections of the reservoir. Reservoir wide recruitment was lower than the 10 year average; CPUE of stock size fish remained below the ten year average and RSD10 decreased as well. The PSD and RSD10 were indicative of a population with large individuals and were similar to historic data.

Historic creel data (no creel survey in 2010, 2011, 2012) showed catch and harvest rates were good and anglers released more fish than they harvested. In 2016, catch and harvest rates remained good although they fell below historical levels. Overall, 58% of the crappie harvested by anglers were white crappie

Anglers spent \$4.20 per hour seeking crappie and were willing to spend an additional 30% to fish for crappie on Barkley Reservoir. The total value of the crappie fishery was estimated at \$207,060.

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MANAGEMENT RECOMMENDATIONS

Continue with the 10-inch minimum size limit and the 30 fish creel limit.

Black Crappie

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|------|--------------|------|------|------|--------------|------|------|------|------|
| Recruitment (Trap Net Survey) | | | | | | | | | | |
| Age-0 CPUE | -- | 0.5 | 1.1 | -- | -- | 0.8 | -- | -- | -- | -- |
| Substock CPUE | 0.5 | 0.5 | 1.1 | 2 | 2.4 | 1.4 | 5.8 | 1.5 | 3.7 | 1.2 |
| Total CPUE | 1.5 | 3 | 2.3 | 4.4 | 7.4 | 2.4 | 7 | 4 | 7.7 | 5.3 |
| Net Nights | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 |
| n | 44 | 96 | 74 | 139 | 282 | 76 | 225 | 128 | 247 | 171 |
| Fall Density (Electrofishing Survey) | | | | | | | | | | |
| PSD | 98 | 92 | 94 | 80 | 59 | 83 | 99 | 64 | 86 | 91 |
| RSD Preferred | 78 | 74 | 74 | 64 | 20 | 44 | 81 | 49 | 39 | 59 |
| CPUE | 72.3 | 54.1 | 21.6 | 43.9 | 25.5 | 28.8 | 17.4 | 30.7 | 54.9 | 34.1 |
| CPUE ≥ Stock | 72.3 | 49.4 | 20.3 | 34.8 | 25.5 | 28.7 | 17.4 | 30.2 | 54.3 | 34.1 |
| CPUE ≥ MSL (10") | 46.9 | 40.0 | 15.9 | 27.3 | 5 | 12.7 | 13.9 | 12.4 | 21.2 | 20.4 |
| n | 198 | 189 | 80 | 168 | 76 | 207 | 80 | 157 | 237 | 112 |
| Fall Hours | 2.65 | 3.54 | 3.85 | 3.46 | 2.68 | 5.6 | 3.7 | 5.18 | 3.8 | 2.8 |
| % Black Crappie | 72 | 62 | 61 | 47 | 46 | 64 | 46 | 44 | 71 | 60 |
| Growth (Fall) | | | | | | | | | | |
| Mean TL at Age-0 Fall | -- | 76 | 95 | -- | -- | 74 | -- | -- | -- | -- |
| Mean TL at Age-2 Fall | -- | 272 | -- | -- | -- | 224 | -- | -- | -- | -- |
| Mortality | | | | | | | | | | |
| Total Mortality | -- | 29% r2=93 | -- | -- | -- | 33% r2=31 | -- | -- | -- | -- |
| Relative Weight (Fall) | | | | | | | | | | |
| Stock | 101 | 116 | 97 | 101 | 94 | 109 | 101 | 100 | 92 | 103 |
| Quality | 109 | 111 | 98 | 110 | 98 | 106 | 97 | 105 | 94 | 100 |
| Preferred | 104 | 102 | 101 | 104 | 88 | 102 | 91 | 89 | 101 | 94 |
| Memorable | 98 | 97 | 103 | 102 | 78 | 96 | 97 | 88 | 91 | 94 |

FISHERY FORECAST

The black crappie electrofishing CPUE decreased to below the 10 year average after having a substantial increase in 2015. The decrease in CPUE could be attributed to high amounts of rainfall in the spring which caused high water levels and increased flow through the reservoir during sampling. However, trap net substock CPUE has been comparable during the last six years and trap net total CPUE and substock CPUE has been relatively consistent. The percentage of black crappie compared to white crappie percentage increased in 2015 and sectional catch rates were 23.3, 60.3, and 27.5 per hour in sections 1, 2, and 3 respectively (52.0, 86.0, and 27 per hour in sections 1, 2, 3, respectively in 2015). Increased densities may be attributed to YOY catch rate in 2013 (5.8/NN). Historic creel data has shown acceptable relative catch rates although lower than seen for white crappie. The fishery forecast and management recommendations were the same as for white crappie.

Redear Sunfish

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Recruitment | | | | | | | | | | |
| (Trap net) | | | | | | | | | | |
| Age-1 CPUE | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Substock CPUE | 1 | 0.7 | 0.3 | 0.1 | 0.2 | 0.6 | 0.03 | 0.5 | 0.3 | 2.4 |
| Total CPUE | 32.8 | 4.3 | 2.6 | 1.6 | 3.5 | 1.6 | 0.4 | 1.6 | 0.5 | 3.8 |
| Net Nights | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 |
| n | 105 | 136 | 84 | 52 | 119 | 50 | 13 | 52 | 17 | 122 |
| Spring Density (Electro Survey) | | | | | | | | | | |
| PSD | 33 | 57 | 28 | 4 | -- | 64 | 43 | 59 | 29 | 63 |
| RSD Preferred | 5 | 43 | 15 | 0 | -- | 21 | 7 | 9 | 5 | 10 |
| CPUE | 23 | 33.5 | 51 | 11.5 | -- | 66 | 23 | 18.5 | 32 | 34.5 |
| CPUE \geq Stock | 22 | 30.5 | 40 | 11.5 | -- | 65.5 | 22 | 17 | 10.5 | 29.5 |
| CPUE \geq Preferred | 1 | 13 | 6 | 0 | -- | 14 | 1.5 | 1.5 | 0.5 | 3 |
| n | 46 | 67 | 102 | 23 | 2 | 132 | 46 | 37 | 64 | 69 |
| Spring Hours | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Angling Pressure (Angler Hours per Acre) | | | | | | | | | | |
| Sunfish | 0.5 | 1.0 | 0.26 | NA | NA | NA | 0.6 | 0.47 | 0.18 | 0.66 |
| Fishing Success (Redear Sunfish only) | | | | | | | | | | |
| Relative Catch Rate | 0.75 | 1 | 0.5 | NA | NA | NA | 0.26 | 0.05 | 0.16 | 0.15 |
| Relative Harvest Rate | 0.65 | 1.0 | 0.36 | NA | NA | NA | 0.13 | 0.02 | 0.12 | 0.13 |
| Redear Mean Weight | 0.51 | 0.52 | 0.42 | NA | NA | NA | 0.5 | -- | 0.42 | 0.55 |
| Redear % Released | 20 | 3 | 20 | NA | NA | NA | 56 | 55 | 34 | 14 |
| Value of Fishery (Trip Expenditures in Thousands) | | | | | | | | | | |
| Sunfish | 10.5 | 41.8 | 11.3 | NA | NA | NA | 13.8 | 13 | 11.8 | 34.9 |

FISHERY FORECAST

Redear sunfish abundance appeared to increase over historic levels. The majority of the redear sunfish were collected in the most northern section (80%).

MANAGEMENT RECOMMENDATIONS

Continue with the 20 fish creel limit implemented in 2008.

Bluegill

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------------------------------------------|------|-------|------|------|------|-------|-------|------|------|-------|
| Recruitment (Trap Net) | | | | | | | | | | |
| Age-1 CPUE | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Substock CPUE | 1.3 | 8 | 1.7 | 1.4 | 1.1 | 9.7 | 0.6 | 3.3 | 2.1 | 3.4 |
| Total CPUE | 5.9 | 13.5 | 7.6 | 6.1 | 9.1 | 15.8 | 4.8 | 10.4 | 7.9 | 11.5 |
| Net Nights | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 |
| n | 188 | 435 | 243 | 194 | 291 | 504 | 152 | 332 | 252 | 367 |
| Density (Electrofishing Survey) | | | | | | | | | | |
| PSD | 25 | 26 | 31 | 37 | 50 | 37 | 31 | 27 | 35 | 18 |
| RSD Preferred | 0 | 0 | 2 | 1 | 3 | 1 | 2 | 1 | 2 | 0 |
| CPUE | 86 | 169 | 132 | 98.5 | 46.5 | 170.5 | 154 | 138 | 105 | 195.5 |
| CPUE ≥ Stock | 82.5 | 156.5 | 128 | 91.5 | 44 | 169.5 | 144.5 | 130 | 98 | 183.5 |
| CPUE ≥ Preferred | 0 | 0.5 | 2 | 0 | 0.5 | 1.9 | 3 | 1.5 | 1.5 | 0 |
| n | 172 | 338 | 264 | 197 | 93 | 341 | 308 | 276 | 210 | 391 |
| Spring Hours | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Angling Pressure (Angler Hours per Acre) | | | | | | | | | | |
| Sunfish | <0.1 | 1.0 | 0.26 | NA | NA | NA | 0.6 | 0.47 | 0.18 | 0.66 |
| Fishing Success (Bluegill only) | | | | | | | | | | |
| Relative Catch Rate | 7.19 | 6.73 | 5.47 | NA | NA | NA | 1.85 | 2.05 | 5.89 | 3.38 |
| Relative Harvest Rate | 5.32 | 5.29 | 3.44 | NA | NA | NA | 0.9 | 0.79 | 2.25 | 2.08 |
| Bluegill Mean Weight | 0.23 | 0.27 | 0.22 | NA | NA | NA | 0.4 | 0.35 | 0.37 | 0.3 |
| Bluegill % Released | 43 | 29 | 38 | NA | NA | NA | 64 | 65 | 72 | 45 |
| Value of Fishery (Trip Expenditures in Thousands) | | | | | | | | | | |
| Sunfish | 10.5 | 41.8 | 11.3 | NA | NA | NA | 13.8 | 13 | 11.8 | 34.9 |

FISHERY FORECAST

Bluegill were abundant but not at quality sizes to persuade anglers to actively seek this species. However, catch rates were typical of catch rates seen in other west Tennessee reservoirs. PSD and RSD's were similar between sections 23-0, 8-0, 26-0 in sections 1, 2, and 3 respectively (46-3, 8-0, and 41-0, in sections 1, 2, 3, respectively in 2015).

Although catch and harvest rates declined below historic levels, the quality of bluegill is similar to the 10 year average. These data reflect the increased RSD8 values seen during sampling surveys.

MANAGEMENT RECOMMENDATIONS

No recommendations are necessary.

Sauger

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------------------------------------------------------------------|------|--------------|-----------|--------------|-----------|-----------|-----------|--------|-----------|------|
| Net Hours | 14.6 | 13.4 | No sample | 11.3 | No Sample | No Sample | No Sample | 11.6 | No Sample | 7.3 |
| n | 35 | 30 | | 71 | | | | 37 | | 38 |
| Recruitment (Gillnet Survey) | | | | | | | | | | |
| Age-1 CPUE | -- | 1.9 | | 2.9 | | | | 1.3 | | -- |
| Substock CPUE | 0.0 | 0.0 | | 0 | | | | 0 | | 0 |
| PSD | 91 | 43 | | 46 | | | | 62 | | 61 |
| RSD Preferred | 36 | 13 | | 12 | | | | 32 | | 45 |
| CPUE | 1.4 | 2.3 | | 5.5 | | | | 3.9 | | 0.1 |
| CPUE ≥ Stock | 1.4 | 2.3 | | 5.5 | | | | 3.9 | | 0.1 |
| CPUE ≥ MSL (15") | 0.5 | 0.9 | | 2.5 | | | | 1.3 | | 0.03 |
| Growth | | | | | | | | | | |
| Mean TL at Age-1 | | 271 | | | | | 292 | | | |
| Mean TL at Age-3 | | 379 | | | | | 410 | | | |
| Relative Weight | | | | | | | | | | |
| Stock | 137 | 92 | | 87 | | | | NA | | NA |
| 105Quality | 93 | 96 | | 97 | | | | NA | | NA |
| Preferred | 101 | 110 | | 107 | | | | NA | | NA |
| Memorable | -- | -- | | - | | | | NA | | NA |
| Trophy | -- | -- | | -- | | | | NA | | NA |
| Mortality | | | | | | | | | | |
| Total Mortality | -- | 64% r2=75 | | 70% r2=94 | | | | | | |
| Stocking | | | | | | | | | | |
| Total No. | | 45410 fry | | | | | 126,508 | 51,339 | 92,698 | |
| 2009 and 2011, 2012, 2013, 2015– No sample due to high water and high discharge during sampling period. | | | | | | | | | | |
| Angling Pressure (Angler Hours per Acre) | | | | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| Sauger | | | | | | | 1.3 | 0.85 | 0.72 | .31 |
| Fishing Success (Bluegill only) | | | | | | | | | | |
| Catch Rate | | | | NA | NA | NA | 0.32 | 0.83 | 0.76 | NA |
| Harvest Rate | | | | NA | NA | NA | 0.11 | 0.39 | 0.32 | NA |
| Mean Weight | | | | NA | NA | NA | 1.61 | 1.57 | 1.44 | NA |
| % Released | | | | NA | NA | NA | 54 | 43 | 56 | NA |
| Value of Fishery (Trip Expenditures in Thousands) | | | | | | | | | | |
| Sauger | | | | NA | NA | NA | 60.8 | 50.5 | 33.6 | 17.9 |

MANAGEMENT RECOMMENDATIONS

Continue with the 15-inch minimum size limit and the 10 fish creel limit.

Channel Catfish

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------------------------------------------|------|------|-----------|------|-----------|-----------|-----------|-------|-----------|-------|
| Net Hours | 14.6 | 13.4 | No sample | 11.3 | No Sample | No Sample | No Sample | 11.6 | No Sample | 7.3 |
| n | 28 | 453 | | 10 | | | | 2 | | 42 |
| Recruitment (Gillnet Survey) | | | | | | | | | | |
| Age-1 CPUE | -- | -- | | -- | | | | -- | | -- |
| Substock CPUE | 1.7 | 22.2 | | 0.4 | | | | -- | | 0.05 |
| Total CPUE | 3.2 | 33.8 | | 0.8 | | | | -- | | 0.1 |
| Density | | | | | | | | | | |
| PSD | -- | -- | | -- | | | | | | |
| RSD Preferred | -- | -- | | -- | | | | | | |
| CPUE | 3.2 | | | -- | | | | | | |
| CPUE ≥ Stock | 1.5 | 11.6 | | 0.4 | | | | | | |
| CPUE > Quality | 0.1 | 0.8 | | 0 | | | | | | |
| CPUE ≥ MSL (34") | 0.0 | 0.0 | | 0 | | | | | | |
| Angling Pressure (Angler Hours per Acre) | | | | | | | | | | |
| Catfish | -- | -- | 2.1 | NA | NA | NA | | 3.77 | 35.8 | 5.2 |
| Fishing Success | | | | | | | | | | |
| Catch Rate | | 0.89 | 0.88 | NA | NA | NA | 0.99 | 0.96 | 1.42 | 0.38 |
| Harvest Rate | 11.6 | 0.85 | 0.83 | NA | NA | NA | 0.68 | 0.59 | 0.94 | 0.25 |
| % Released | 0.8 | 11 | 5 | NA | NA | NA | 32 | 63 | 36 | 46.6 |
| Mean Weight | 0.0 | 2.05 | 2.24 | NA | NA | NA | 2.39 | 1.9 | 1.99 | 1.7 |
| Value of Fishery (Trip Expenditures in Thousands) | | | | | | | | | | |
| Catfish | 58.0 | 58.8 | 70.3 | NA | NA | NA | 266.2 | 139.1 | 118.7 | 258.4 |

2009, 2011, 2012, 2013, and 2015 – No sample due to high water and high discharge during sampling period.

FISHERY FORECAST

Historic data has shown channel catfish were the dominant species collected during sauger netting and harvested by anglers. Although substock channel catfish comprised the majority of the fish collected, angler data and angler reports have indicated a quality blue catfish population in Barkley Reservoir.

MANAGEMENT RECOMMENDATIONS

No recommendations are necessary.

Gizzard Shad

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------------------|-------|-------|------|-------|------|------|------|-------|------|-------|
| Fall Electro Hours | 2.65 | 3.54 | 3.85 | 3.46 | 2.68 | 5.6 | 3.7 | 5.18 | 3.8 | 2.8 |
| Recruitment | | | | | | | | | | |
| CPUE < 150 mm | 24.5 | 11 | 11.9 | 98.8 | 70.2 | 32.3 | 44.1 | 46 | 24.5 | 55.5 |
| CPUE ≥ 275 mm | 10.6 | 18 | 0.4 | 0.4 | 1.5 | 3 | 0.5 | 0.2 | 2.9 | 0.6 |
| Density | | | | | | | | | | |
| Fall total CPUE | 136.6 | 102.4 | 98.7 | 153.4 | 167 | 81.5 | 58.4 | 120.4 | 85.9 | 109.3 |
| Fall CPUE Substock | 36.3 | 24.2 | 29.1 | 106.5 | 113 | 38.4 | 29.4 | 69.2 | 31.9 | 53.8 |
| Fall CPUE ≥ Stock | 100.3 | 78.2 | 69.6 | 46.9 | 54 | 43.1 | 29 | 51.3 | 54 | 55.5 |
| Fall total collected (n) | 339 | 346 | 376 | 508 | 452 | 453 | 317 | 419 | 318 | 299 |
| Relative Weight (Fall) | | | | | | | | | | |
| Stock | | | | | | | 91 | 102 | 95 | 95 |
| Quality | | | | | | | 92 | 102 | 95 | 95 |

DISCUSSION

CPUE increased from 2015 and is comparable to the 10 year average. CPUE was consistent as sampling progressed upstream (112.7, 112.4. and 103.9 per hour in Sections 1, 2, 3, respectively). Approximately 54, 87, and 43% of the gizzard shad collected in sections 1, 2 and 3, respectively were substock. Since Asian carp have been collected during surveys, Wr's trend data will be monitored. In 2015, sectional stock Wr's were 110, 79, and 84 for sections 1, 2, 3, respectively.

Threadfin Shad

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------|-------|-------|-------|------|-------|------|-------|------|------|------|
| Density | | | | | | | | | | |
| Fall CPUE ≤ 75 mm | 23.5 | 106.9 | 60 | 54.6 | 87.3 | 69.1 | 90 | 60.2 | 7.4 | 0 |
| Fall Total CPUE | 118.6 | 106.9 | 103.9 | 56.4 | 106.8 | 89.8 | 102.1 | 67 | 39.9 | 51.9 |
| Fall Total collected (n) | 128 | 365 | 379 | 195 | 307 | 499 | 583 | 319 | 141 | 120 |

DISCUSSION

As with gizzard shad, CPUE of threadfin shad fluctuated as sampling progressed upstream (129.3, 13.7, and 0.0 per hour in Section 1, 2, and 3 respectively). Size distributions were similar between sections and threadfin shad were collected at preferred sizes for predators.

MANAGEMENT RECOMMENDATIONS:

No recommendations are necessary.

White Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------------------------|------|--------------|-----------|------|-----------|-----------|-----------|------|-----------|------|
| Net Hours | 14.6 | 13.4 | No Sample | 11.3 | No Sample | No Sample | No Sample | 11.6 | No Sample | 7.3 |
| n | 15 | 40 | | 23 | | | | 11 | | 26 |
| Recruitment (Gillnet Survey) | | | | | | | | | | |
| Age-1 CPUE | -- | 1.1 | | -- | | | | -- | | -- |
| Substock CPUE | -- | 0 | | 0 | | | | 0 | | 0 |
| Total CPUE | -- | 3 | | 1.8 | | | | 1 | | 0.06 |
| Growth | | | | | | | | | | |
| Mean TL at Age-1 | | 250 | | -- | | | | -- | | -- |
| Mean TL at Age-3 | -- | 364 | | -- | | | | -- | | -- |
| Mortality | | | | | | | | | | |
| Total Mortality | -- | 43% r2=73 | | -- | | | | -- | | -- |

2009, 2011, 2012, 2013, and 2015 – No sample due to high water and high discharge during sampling period

Striped Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------------------------|------|------|-----------|------|-----------|-----------|-----------|------|-----------|-------|
| Net Hours | 14.6 | 13.4 | No Sample | 11.3 | No Sample | No Sample | No Sample | 0 | No Sample | 7.3 |
| n | 7 | 19 | | 16 | | | | 11.6 | | 1 |
| Recruitment (Gillnet Survey) | | | | | | | | | | |
| Age-1 CPUE | -- | 0.9 | | -- | | | | 0 | | 0 |
| Substock CPUE | -- | 0.05 | | 0.5 | | | | 0 | | 0 |
| Total CPUE | -- | 3.08 | | 1.4 | | | | 0 | | 0.002 |
| Growth | | | | | | | | | | |
| Mean TL at Age-1 | -- | 291 | | -- | | | | | | |
| Mean TL at Age-2 Fall | -- | 583 | | 415 | | | | | | |
| Mortality | | | | | | | | | | |
| Total Mortality | -- | | | | | | | | | |
| Stocking | | | | | | | | | | |
| Total No. | -- | -- | | | | | | | | |

2009, 2011, 2012, 2013, and 2015 – No sample due to high water and high discharge during sampling period.

Other Species Collected

| <u>Species</u> | <u>Number Collected</u> | <u>Gear</u> | <u>Value</u> |
|-----------------------|-----------------------------|----------------|--------------|
| Channel Catfish | 3 | Trap Net | <0.1 |
| Flathead catfish | 1 | Trap Net | <0.1 |
| Freshwater Drum | 10 | Trap Net | 0.3 |
| Gizzard Shad | 28 | Trap Net | 0.9 |
| Longear Sunfish | 12 | Trap Net | 0.4 |
| Orangespotted sunfish | 6 | Trap Net | 0.2 |
| Golden Redhorse | 1 | Trap Net | <0.1 |
| | 7 | Sauger Net | 1.0 |
| Sauger | 1 | Fall Electro | <0.1 |
| Smallmouth Bass | 1 | Spring Electro | 0.5 |
| Spotted Bass | 2 | Sauger Net | 0.3 |
| | 16 | Fall electro. | 5.7 |
| Spotted Sucker | 1 | Trap Net | <0.1 |
| | 6 | Sauger Net | 0.8 |
| Threadfin Shad | 247 | Trap Net | 7.7 |
| Walleye | 10 | Sauger Net | 1.4 |
| Warmouth | 17 | Trap Net | 0.5 |
| White Bass | 26 | Sauger Net | 3.6 |
| Yellow Bass | 147 | Trap Net | 4.6 |

Several silver carp were seen during both spring and fall sampling.

Value: Trap net - number per net night

Electrofishing - number per hour

Gill net - number per hour

Sauger net – number per hour

2016 Water Quality Monitoring

The Tennessee valley experienced drought conditions in 2007 and 2008. Although drought conditions appeared to subside in 2009, drier conditions continued in the summer 2010 and 2011. The USACOE completed their work at Wolf Creek Dam (Cumberland Lake) but are continuing to work at Center Hill Dam. The work at Center Hill Dam should not affect flows through the Cumberland River. In 2009, water quality conditions at Barkley Reservoir improved over 2007 and 2008 readings. In 2013 -2016, surface water temperatures did not exceed 30 C during sampling dates in June, July and August.

At station 1 (CRM 78.1), dissolved oxygen levels remained above 4.0 ppm at all depths in June, July and August. Water temperatures at station 1 exceeded water temperatures at station 2 at all depths during all months sampled. Secchi disc readings were indicative of a riverine portion of a mainstream reservoir (59, 68, and 79 cm in June, July, August, respectively); pH levels also fell within acceptable ranges (8.0, 7.8, 7.8 in June, July, and August, respectively). Alkalinity averaged 77 mg/l during June through August which was similar to historic records.

At station 2 (CRM 105) water temperatures were cooler than seen downstream and dissolved oxygen level was acceptable at all depths each month. Secchi disc readings were slightly lower at the upstream station (45, 64, 77 cm in June, July, and August, respectively); conductivity readings were similar between stations and similar to historic data. Alkalinity averaged 78 mg/l during June – August.

Sampling Stations: CRM 78.0 and CRM 105.

Kentucky Reservoir - 2016

Description

Area (acres): TOTAL:160,300 TN: 108,217 **Mean depth (feet) – 20'** **Shoreline (miles): 2,380**

Counties: Stewart, Henry, Benton, Houston, Humphreys, Decatur, Perry, Wayne, Hardin

Total Fishing Effort 2016 (angler hours): 1,064,731 Total Value by Anglers 2015: \$9,348,220

1.75 mile long canal connecting Kentucky and Barkley Reservoirs located at TRM 25.3

**Summer Pool: 359 MSL
miles**

Winter Pool: 354 MSL

Drainage area: 40,200 sq.

Management Strategies:

triped Bass/Hybrid Striped Bass – 15" MLL, 2 fish - 1987

LMB/SMB:

Creel limit reduced from 10 fish to 5 fish in 1997.

13" MLL lakewide – 1998

14" MLL north of TNRM 111.1 and

13" MLL south of that point - 2000.

14" MLL reservoir-wide -2001.

15" MLL lakewide – 2004

White Bass: 30 fish creel limit - 1989

Creel limit reduced to 15 - 2005

Crappie: 10" MLL with 30 fish creel – 1997

Sauger: 14" MLL with 15 fish creel – 1992

14" MLL with 10 fish creel - 2001

15" MLL with 10 fish creel - 2014

Redear Sunfish: 30 fish creel limit - 2008

20 fish creel limit – 2013

Habitat Enhancement and Monitoring

Shallow water fish attractors (stake beds) – 105

Cypress Tree Plantings – 60 trees

Deep water Fish attractors (refurbished) – 13 of 28

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Total Angler Pressure (hrs/acre) | 13.7 | 13.7 | 16.8 | 12.9 | 13.1 | 14.8 | 12.5 | 10.3 | 11.5 | 9.8 |

Black Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------------------------------------------|-------|-------|-------|-------|----------|----------|----------|-------|----------|----------|
| Angling Pressure (Angler Hours per Acre) | | | | | | | | | | |
| All Black Bass | 2.5 | 2.62 | 4.43 | 3.6 | 3.9 | 4.45 | 3.8 | 3.6 | 4.29 | 3.84 |
| Smallmouth | 0.0 | <0.1 | 0.04 | 0 | 0 | 0.01 | 0.3 | -- | 0.3 | -- |
| Tournaments | | | | | | | | | | |
| Tournaments ^{BITE} | 6 | 19 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lbs/Angler Day ^{BITE} | 5.03 | 6.0 | 6.6 | -- | -- | -- | -- | -- | -- | -- |
| Fish/Angler Day ^{BITE} | 2.06 | 2.2 | 2.01 | -- | -- | -- | -- | -- | -- | -- |
| Angler Hours ^{CREEL} | | | | | | | | | | |
| Catch Rate ^{CREEL} | | | | | | | | | | |
| Fishery Value (Trip Expenditures in Thousands) | | | | | | | | | | |
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| Black Bass | 1,538 | 2,103 | 4,259 | 2,031 | 4,266.50 | 4,569.20 | 2,948.00 | 4,248 | 5,865.50 | 3,472.20 |
| Smallmouth | 0 | 2.5 | 27.1 | 0 | 0 | 2.5 | 16.1 | -- | 13.2 | -- |

Largemouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------------------|------|-------|-------|-------|-------|------|------|------|---------|---------|
| Spring Electro hours | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Fall Electro hours | 8.96 | 7.71 | 7.89 | 6.68 | 4.08 | 8.02 | 7.3 | 6.79 | 6.73 | 7.56 |
| Recruitment | | | | | | | | | | |
| Age-1 CPUE | -- | -- | | 12.5 | 11.2 | -- | -- | -- | -- | 9.3 |
| Substock CPUE | 15 | 33.0 | 43.5 | 17.7 | 7.8 | 18.3 | 10.5 | 11.2 | 7.3 | 6.5 |
| Spring Density (n) | 506 | 695 | 783 | 627 | 501 | 584 | 388 | 531 | 404 | 281 |
| PSD | 77 | 47 | 61 | 64 | 85 | 73 | 68 | 64 | 84 | 85 |
| RSD Preferred | 38 | 27 | 21 | 18 | 21 | 30 | 44 | 37 | 28 | 50 |
| CPUE | 84.3 | 115.8 | 130.5 | 104.5 | 83.5 | 97.3 | 64.7 | 88.5 | 67.3 | 46.8 |
| CPUE ≥ Stock | 70 | 82.8 | 87 | 86.8 | 76 | 79 | 54.2 | 77.3 | 60 | 40.3 |
| CPUE ≥ MSL (15") | 25.9 | 22.5 | 18.2 | 16 | 15.8 | 23.8 | 23.8 | 28.5 | 17 | 20.2 |
| Fall Density (n) | 451 | 676 | 385 | 383 | 398 | 396 | 433 | 345 | 298 | 600 |
| Fall Total CPUE | 56.1 | 91.3 | 63.5 | 60.4 | 109.9 | 46.1 | 71 | 57.3 | 50.2 | 76.6 |
| Fall CPUE Substock | 28.7 | 26.6 | 5.5 | 6.7 | 20.3 | 10.4 | 9.3 | 4.2 | 4.1 | 34.7 |
| Fall CPUE>Stock | 27.4 | 64.7 | 58 | 53.6 | 89.6 | 35.7 | 61.8 | 53.1 | 46.1 | 41.8 |
| Stocking (FLMB – 1,162 Acres) | | | | | | | | | | |
| # per Acre | -- | -- | -- | -- | -- | -- | -- | -- | 189.5 | 123.2 |
| Total No. | -- | -- | -- | -- | -- | -- | -- | -- | 220,198 | 143,163 |
| Growth | | | | | | | | | | |
| Mean TL at Age-1 | -- | -- | 156 | 182 | -- | -- | -- | -- | -- | 179 |
| Mean TL at Age-3 | -- | -- | -- | 334 | -- | -- | -- | -- | -- | 334 |
| Relative Weight | | | | | | | | | | |
| Stock | 105 | 92 | 98 | 98 | 96 | 91 | 88 | 93 | 104 | 95 |
| Quality | 95 | 93 | 89 | 89 | 93 | 88 | 86 | 88 | 93 | 95 |
| Preferred | 97 | 93 | 98 | 88 | 93 | 89 | 90 | 86 | 100 | 92 |
| Memorable | 98 | 95 | 98 | 90 | 88 | 93 | 90 | 82 | 92 | 96 |
| Trophy | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Mortality | | | | | | | | | | |
| Total Mortality | | | 44% | | -- | -- | | | | 25% |
| | | | r2=64 | | | | | | | R2=60 |
| Fishing Success | | | | | | | | | | |
| Catch Rate | 0.69 | 2.11 | 1.52 | 1.81 | 1.52 | 1.32 | 1.61 | 1.06 | 0.85 | 0.91 |
| Harvest Rate | 0.18 | 0.2 | 0.16 | 0.19 | 0.15 | 0.13 | 0.1 | 0.13 | 0.09 | 0.07 |
| % Released | 93 | 97 | 95 | 94 | 94 | 96 | 94 | 90 | 90 | 93 |
| Mean Weight | 2.75 | 2.65 | 2.8 | 2.31 | 2.5 | 2.44 | 2.63 | 2.59 | 2.53 | 3.04 |

FISHERY FORECAST

Recruitment was poor in 2016 but recruitment has been fair to good in fourteen of the last seventeen years (2004, 2011, and 2016 poor) following poor years in four of the previous seven years. Catch rates with electrofishing gear fell below 60 fish/hour, which has not happened since 1998. In addition, densities of memorable size fish were comparable to densities observed in the early and mid 1990's. The RSD15 has remained above or within the acceptable level for the last ten years. The increased RSD15 in 2016 may be attributed to declines in stock size fish due to lower recruitment rates in 2013 - 2015. Largemouth bass have experienced excellent recruitment from 2008 – 2012; however fish populations experience cycles in their population densities and due to lower recruitment rates for the past few years, anglers may experience decreased catch rates due to lower densities of quality to preferred size bass. The decline of preferred size fish in the late 1990's to early 2000 was attributed to poor recruitment in the early 1990's (failures in 5 of 8 years).

Wt's improved in 2015 from the previous three years, and maintained an acceptable level in 2016. YOY LMB CPUE continues to decline below historic levels. However, fall CPUE increased above historical fall rates and the length frequency distributions were similar to historic levels.

Largemouth bass were the most sought species by anglers. Fishing pressure decreased slightly from 2015; catch rates by anglers seeking largemouth bass remained high although rates declined below historic levels in 2015 and 2016. Creel data showed the fishing pressure was slightly higher in the northern section (70% northern section) and catch rates for black bass were higher in the northern section (0.97 (northern) to 0.77 (southern) per hour catch rate). Anglers continued to release over 90% of largemouth bass caught.

Electrofishing catch rates varied in each section of the reservoir:

| <u>Relative Value</u> | Section I | | Section II | | Section III | |
|-----------------------|------------------|-------------|-------------------|-------------|--------------------|-------------|
| | <u>Spring</u> | <u>Fall</u> | <u>Spring</u> | <u>Fall</u> | <u>Spring</u> | <u>Fall</u> |
| CPUE | 53.5 | 62.5 | 52.0 | 52.7 | 35.0 | 99.0 |
| CPUE YOY | 9.5 | 8.0 | 6.5 | 13.6 | 3.5 | 68.1 |
| CPUE RSD15 | 22.5 | 12.2 | 27.5 | 24.6 | 10.5 | 15.0 |

Anglers seeking black bass spent \$8.34 per hour seeking bass and were willing to spend an additional 61% to fish for bass on Kentucky Reservoir. The total value of the bass fishery was \$5,590,400.

MANAGEMENT RECOMMENDATIONS:

Continue with the 15-inch minimum size limit and the 5 fish per day aggregate creel limit.

Smallmouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Spring Electro Hours | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Fall Electro Hours | 8.96 | 7.71 | 7.89 | 6.68 | 4.08 | 8.02 | 7.3 | 6.79 | 6.73 | 7.56 |
| Recruitment | | | | | | | | | | |
| Age-1 CPUE | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Substock CPUE | 0.2 | -- | 0 | 1.8 | 0.7 | 2.3 | 0.2 | 1.3 | 0.8 | 0.7 |
| Spring Density (n) | 9 | | 2 | 17 | 10 | 29 | 3 | 24 | 11 | 10 |
| PSD | 25 | 43 | 50 | 50 | 50 | 57 | 80 | 44 | 50 | 50 |
| RSD Preferred | 25 | 29 | 50 | 50 | 50 | 29 | -- | 38 | 33 | 50 |
| CPUE | 1.5 | 1.7 | 0.3 | 2.8 | 1.7 | 4.7 | 0.5 | 4 | 1.8 | 1.7 |
| CPUE ≥ Stock | 1.2 | 1.7 | 0.3 | 1 | 1 | 2.3 | 0.3 | 2.7 | 1 | 1 |
| CPUE ≥ Preferred | -- | 0.5 | 0.2 | 0.5 | 0.5 | 0.7 | 0 | 1.7 | 0.3 | 0.5 |
| Fall Density (n) | 7 | 10 | 3 | 1 | 5 | 7 | 17 | 12 | 6 | 10 |
| Fall Total CPUE | 0.8 | 1.3 | 0.5 | -- | 0.9 | 0.7 | 1.7 | 1.8 | -- | 1.8 |
| Fall CPUE Substock | 0.3 | 0.4 | 0.1 | -- | 0.7 | 0.4 | 0.4 | 1 | -- | 0.7 |
| Fall CPUE>Stock | 0.5 | 0.9 | 0.4 | -- | 0.2 | 0.3 | 1.3 | 0.8 | -- | 1.1 |
| Fall CPUE > P | 0.1 | 0.3 | 0 | -- | 0 | 0 | 0.1 | 0.2 | -- | 0.5 |
| Growth | | | | | | | | | | |
| Mean TL at Age-1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Mean TL at Age-3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Mortality | | | | | | | | | | |
| Total Mortality | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Relative Weight (Fall) | | | | | | | | | | |
| Stock | 83 | 106 | 90 | -- | -- | 84 | 83 | 86 | -- | -- |
| Quality | 89 | 94 | -- | -- | 83 | -- | 68 | 80 | -- | -- |
| Preferred | -- | 88 | -- | -- | -- | -- | 72 | -- | -- | -- |
| Memorable | -- | 99 | -- | -- | -- | -- | -- | 70 | -- | -- |
| Trophy | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Fishing Success (Smallmouth only) | | | | | | | | | | |
| Catch Rate | -- | 0 | 0.65 | 0 | 0 | 1.09 | 0.13 | 0.02 | 0.1 | 0.03 |
| Harvest Rate | -- | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.02 | 0 |
| % Released | -- | 99 | 80 | 0 | 0 | 95 | 90 | 85 | 99 | 94.8 |
| Mean Weight | -- | 3.7 | 2.15 | 0 | 0 | 2.35 | 3.96 | 4.29 | 3.34 | 2.7 |

FISHERY FORECAST

The density of smallmouth bass remains low in Kentucky Reservoir, although quality fish have been caught during tournaments. Only 24 and 31 smallmouth bass were collected during spring and fall sampling, respectively.

Smallmouth bass electrofishing catch rates are very low on Kentucky Reservoir (usually less than 10 fish collected lakewide). In addition, historical creel survey data has shown smallmouth bass harvest to be less than 0.04 fish/hour and catch and release to be less than 0.2 fish/hour. Percent effort (those anglers seeking smallmouth bass) has consistently been below 3%. These data reflect a low density smallmouth bass population and a black bass population dominated by largemouth bass.

MANAGEMENT RECOMMENDATIONS No recommendations.

Spotted Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Spring Electro Hours | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Fall Electro Hours | 8.96 | 7.71 | 7.89 | 6.68 | 4.08 | 8.02 | 7.3 | 6.79 | 6.73 | 7.56 |
| Recruitment | | | | | | | | | | |
| Age-1 CPUE | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Substock CPUE | -- | -- | 0.7 | 0.3 | 0.7 | 2.2 | 0 | 0.1 | 0.3 | 0.3 |
| Spring Density (n) | 56 | 32 | 28 | 36 | 49 | 34 | 5 | 43 | 25 | 24 |
| PSD | 57 | 80 | 46 | 41 | 84 | 71 | 80 | 33 | 74 | 86 |
| RSD Preferred | -- | 30 | 25 | 6 | 31 | 24 | 0 | 3 | 4 | 9 |
| CPUE | 9.3 | 5.3 | 4.7 | 6 | 8.2 | 5.7 | 0.8 | 7.2 | 4.2 | 4 |
| CPUE \geq Stock | 8.3 | 5 | 4 | 5.7 | 7.5 | 3.5 | 0.8 | 6.7 | 3.8 | 3.7 |
| CPUE \geq Preferred | 2 | 1 | 1 | 0.3 | 2.3 | 0.8 | 0 | 0.2 | 0.2 | 0.3 |
| Fall Density (n) | 49 | 33 | 11 | 11 | 14 | 31 | 17 | 8 | 22 | 31 |
| Fall total CPUE | 5.6 | 3.5 | 1.3 | 2.3 | 2.9 | 3.6 | 2.6 | 1.2 | 4.7 | 3.6 |
| Fall CPUE Substock | 1.1 | 0.5 | 0.3 | 0.8 | 2.1 | 1.3 | 0.4 | 0.5 | 0.8 | 3 |
| Fall CPUE \geq Stock | 4.5 | 3 | 1 | 1.5 | 0.9 | 2.3 | 2.3 | 0.7 | 3.9 | 0.9 |
| Fall CPUE $>$ P | 0.7 | 0.2 | 0 | 0 | 0 | 0.1 | 0 | 0 | 0.4 | 0.1 |
| Relative Weight (Fall) | | | | | | | | | | |
| Stock | 115 | 91 | 99 | 98 | 104 | -- | 94 | 148 | 97 | 96 |
| Quality | 94 | 88 | 95 | 89 | 96 | 82 | 73 | 99 | 91 | 95 |
| Preferred | 101 | 100 | -- | -- | -- | 91 | | -- | 106 | 87 |
| Memorable | -- | -- | -- | -- | -- | -- | | -- | -- | -- |
| Trophy | -- | -- | -- | -- | -- | -- | | -- | -- | -- |
| Fishing Success (Spotted bass only) | | | | | | | | | | |
| Relative Catch Rate | 0.19 | 0.17 | 0.04 | 0.01 | 0.04 | 0.1 | 0.06 | 0.05 | 0.06 | 0.05 |
| Relative Harvest Rate | 0.04 | 0.02 | 0.01 | 0 | 0.01 | 0.01 | 0 | 0 | 0 | 0.01 |
| % Released | 76 | 87 | 80 | 0 | -- | 92 | 89 | 88 | 92 | 85 |
| Mean Weight | 1.59 | 1.21 | 0.96 | 0 | -- | 1.2 | 0.94 | 1.1 | 0.94 | 1.48 |

White Crappie

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------------------------------------------|-------|-------|-------|-------|----------------|-------|----------|----------|----------|-------------|
| Recruitment (Trap Net Survey) | | | | | | | | | | |
| Age-0 CPUE | 5 | 3.8 | 4.4 | 11 | 0.3 | -- | -- | -- | -- | 0.6 |
| Substock CPUE | 4.8 | 3.4 | 4 | 11.9 | 1.4 | 4.9 | 7.4 | 13.3 | 16.1 | 0.6 |
| Total CPUE | 6.5 | 4.5 | 4.5 | 13.4 | 2.9 | 6.4 | 8.7 | 14.5 | 23.7 | 1.8 |
| Net Nights | 110 | 112 | 111 | 111 | 112 | 111 | 112 | 112 | 110 | 112 |
| n | 461 | 508 | 500 | 1,483 | 329 | 707 | 971 | 1,625 | 2,603 | 206 |
| Fall Density (Electrofishing Survey) | | | | | | | | | | |
| PSD | 84 | 91 | 91 | 92 | 80 | 94 | 95 | 95 | 84 | 78 |
| RSD-P | 97 | 64 | 63 | 78 | 50 | 53 | 77 | 72 | 65 | 58 |
| CPUE | 58.9 | 43.9 | 43.7 | 47.3 | 72.1 | 63.1 | 63.3 | 40.5 | 45.3 | 16.7 |
| CPUE ≥ Stock | 58.7 | 43.9 | 42.9 | 45.7 | 71.8 | 62.5 | 63 | 40.5 | 41.9 | 16.5 |
| CPUE ≥ MSL (10") | 30.9 | 39.3 | 25.7 | 34.9 | 37.4 | 32.8 | 48.2 | 28.7 | 27.1 | 9.4 |
| n | 461 | 364 | 366 | 355 | 279 | 525 | 971 | 304 | 291 | 152 |
| Fall Hours | 8.96 | 7.71 | 7.89 | 6.68 | 4.08 | 8.02 | 7.3 | 6.79 | 6.73 | 7.56 |
| Growth (Fall) | | | | | | | | | | |
| Mean TL at Age-0 | 81 | 77 | 79 | | 129 | -- | -- | -- | -- | 87 |
| Mean TL at Age-2 | -- | -- | -- | | 159 | -- | -- | -- | -- | 241 |
| Mortality | | | | | | | | | | |
| Total Mortality | -- | -- | -- | | 53% r2=0.97 | -- | -- | -- | -- | 41% r2=0.76 |
| Relative Weight (Fall) | | | | | | | | | | |
| Stock | 133 | 101 | 127 | 117 | 137 | 100 | 120 | 113 | 97 | 101 |
| Quality | 109 | 105 | 110 | 109 | 108 | 102 | 103 | 106 | 105 | 106 |
| Preferred | 103 | 99 | 106 | 105 | 100 | 98 | 101 | 97 | 99 | 104 |
| Memorable | 98 | 97 | 103 | 109 | 95 | 89 | 95 | 96 | 100 | 99 |
| Trophy | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Angling Pressure (Angler Hours per Acre) | | | | | | | | | | |
| All Crappie | 5.9 | 6.04 | 6.1 | 5.1 | 4.1 | 4.41 | 4.56 | 3.58 | 3.59 | 2.93 |
| Fishing Success | | | | | | | | | | |
| Crappie Catch Rate | 2.72 | 2.59 | 2.16 | 2.85 | 2.07 | 2.58 | 2.02 | 1.95 | 1.95 | 2.15 |
| Crappie Harvest | 1.49 | 1.67 | 1.23 | 1.57 | 1.03 | 0.77 | 1.02 | 0.92 | 0.79 | 0.76 |
| WC % Released | 46 | 41 | 47 | 44 | 49 | 74 | 49 | 53 | 60 | 67 |
| WC Mean Weight | 0.71 | 0.75 | 0.69 | 0.69 | 0.73 | 0.85 | 0.78 | 0.8 | 0.81 | 0.8 |
| Value of Fishery (Trip Expenditures in Thousands) | | | | | | | | | | |
| All Crappie | 1,454 | 2,008 | 2,678 | 1,342 | 2,073 | 2,515 | 3,080.10 | 1,804.60 | 1,947.20 | 1,189.30 |

FISHERY FORECAST:

White crappie have experienced erratic recruitment since 2000 and electrofishing densities decreased below historic levels; preferred size fish CPUE declined and fell below the 10-year average. CPUE of YOY white crappie in trap net surveys was 0.1 (2.1 in 2015), 0.2 (4.4 in 2015), and 1.6 (48.9 in 2015) in sections I, II, and III, respectively. Acceptable YOY/NN levels in sections I, II, and III were 2.0, 5.0, and 10.0, respectively. The mean length of white and black collected during electrofishing surveys was 9.45 and 8.46 inches, respectively.

Black crappie densities have been comparable to white crappie trap net densities since 2000 and densities have been highest in the most northern section (86% in 2011; 83% in 2012; 74% in 2013; 59% in 2014; 59% in 2015; 33% in 2016). In Sections 1, 2 and 3, black crappie comprised 72, 29 and 47% of crappie collected during 2016 fall electrofishing surveys, respectively. Black crappie comprised 29% of the crappie caught by anglers.

Crappie were the second most sought species on Kentucky Reservoir and catch rates by anglers have remained above 2.0 fish/hour in 7 of the last 10 years (fish/hour in 2016); mean weight of white crappie harvested has also remained above 0.75 pounds during the last four years (0.80 lbs. in 2016). However, the poor 2011 – 2013 year classes negatively impacted angler harvest rates in 2014 -2016 and the poor recruitment in the most northern section (< 2.0 in five of the last eight years) will negatively impact angler harvest rates in the Big Sandy area.

Sampling surveys showed the catch rate of crappie \geq 10-inches has decreased and dropped below the 10-year average. Trap netting surveys showed over-all average recruitment of young-of-year white crappie has been acceptable in the 21st century, but 2016 was a poor year. Sectional comparisons showed white crappie recruitment (YOY) was lowest in the two most northern section (Section 1: 0.2/net night; Section 2: 0.3/net night; Section 3 1.6/net night)(Section 1: 2.1; Section 2: 4.4; Section 3: 48.9 in 2015) (acceptable levels: SI-2.0; SII-5.0; SIII-10/.0). CPUE of YOY white crappie has declined below historical levels in eight of the last fourteen years in the most southern section (2005, 2007, 2010, 2012, 2014, 2015 - good) and five of the last seven years in the most northern section. Although crappie electrofishing catch rates declined as sampling progressed downstream, the decline may be partly attributed to availability of cover at reduced water levels and not actual population density.

Black crappie densities have appeared to stabilize, and relative catch rates showed a catch and harvest rate of 0.62 and 0.21/hr., respectively. The majority of the fishing pressure for crappie was in the northern section (78%) and lake wide fishing pressure has declined slightly with the improved bass fishing since 2009. The mean length of white and black crappie harvested by anglers in 2016 was 294-- and 283 mm, respectively.

A pole comparison study was conducted to determine crappie harvest with anglers using four or more poles compared to less than four poles. Approximately 338 angler parties containing 603 anglers were interviewed. Spider rigging is a popular and effective way to harvest crappie; 88% of the anglers interviewed were on the northern section of the lake, therefore, the table below summarizes pole comparison data on the northern end of Kentucky Lake only. Conclusions indicate that anglers fishing four or more poles have a greater chance of both catching and harvesting crappie. Also, anglers using four or more poles can reduce the amount of time it takes to catch a creel limit due to their ability to land more fish than anglers using three or fewer poles.

The northern section of Kentucky Reservoir represents the area from New Johnsonville Bridge north to the Kentucky-Tennessee state line. The data is analyzed separating the Big Sandy River from the remainder of the fishable water in the northern section.

| | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------------|
| Data summary for the northern section of Kentucky Lake in regards to number of poles used by anglers. | | |
| | Big Sandy River | Remainder of the northern section of Kentucky Lake |
| % of anglers interviewed | 45% | 55% |
| % of anglers using 4 or more poles | 55% | 40% |
| Overall catch and harvest rate comparison of 3 or less and 4 or more poles on the northern section of Kentucky Lake. (1,051 hrs. fished; 5010 fish caught; 1,788 fish harvested; 3,222 fish released) | | |
| | 3 or less poles/angler | 4 or more poles/angler |
| Overall catch rate | 4.4 fish/hr. | 5.2 fish/hr. |
| Overall harvest rate | 1.6 fish/hr. | 1.8 fish/hr. |

Anglers fishing for crappie spent \$3.75 per hour fishing for crappie and were willing to spend an additional 36% (20% less than 2015) to fish for crappie on Kentucky Reservoir. The total value of the fishery was estimated at \$1,850,010. Anglers seeking crappie in the northern and the southern section of the reservoir spent \$3.62 (\$.50 increase from 2015) and \$4.20 (\$.68 increase from 2015) per hour fishing for crappie, respectively.

Black Crappie

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------------------------------------------|-------|-------|-------|---------|-------|-------|-------|-------|-------|---------|
| Recruitment (Trap Net Survey) | | | | | | | | | | |
| Age-0 CPUE | 1.1 | 0.7 | 1.5 | 5 | 0.7 | -- | -- | -- | -- | 0.3 |
| Substock CPUE | 1.1 | 0.7 | 1.4 | 5.2 | 0.9 | 0.8 | 1.9 | 3.4 | 2.4 | 0.3 |
| Total CPUE | 4.4 | 2.9 | 3.6 | 8 | 5.4 | 3.2 | 5 | 5.8 | 4.8 | 2.5 |
| Net Nights | 110 | 112 | 111 | 111 | 112 | 111 | 112 | 112 | 110 | 112 |
| n | 486 | 320 | 402 | 882 | 606 | 353 | 556 | 651 | 531 | 275 |
| Fall Density (Electrofishing Survey) | | | | | | | | | | |
| PSD | 94 | 93 | 86 | 82 | 64 | 74 | 92 | 68 | 70 | 69 |
| RSD Preferred | 54 | 64 | 63 | 54 | 28 | 35 | 44 | 36 | 21 | 36 |
| CPUE | 38 | 48.0 | 21.3 | 23.7 | 58.6 | 32.4 | 29.8 | 58.4 | 64.9 | 16 |
| CPUE ≥ Stock | 38 | 48.0 | 20.9 | 22.8 | 57.5 | 31.5 | 27.5 | 58.1 | 56.9 | 15.5 |
| CPUE ≥ MSL (10") | 20.2 | 31.1 | 13.5 | 11.8 | 16.4 | 9.9 | 13.4 | 20.5 | 13.4 | 5.3 |
| n | 416 | 330 | 131 | 184 | 240 | 285 | 246 | 334 | 420 | 146 |
| Fall Hours | 8.96 | 7.71 | 7.89 | 6.68 | 4.08 | 8.02 | 7.3 | 6.79 | 6.73 | 7.56 |
| % BC | 47 | 48 | 26 | 34 | 46 | 34 | 38 | 52 | 59 | 49 |
| vs. WC | | | | | | | | | | |
| Growth (Fall) | | | | | | | | | | |
| Mean TL at Age-1 | 73 | 80 | | 99 | -- | -- | | -- | -- | 161 |
| Mean TL at Age-2 | -- | -- | | 232 | -- | -- | | -- | -- | 220 |
| Mortality | | | | | | | | | | |
| Total Mortality | -- | -- | | 58% | -- | -- | | -- | -- | 41% |
| | | | | r2=0.96 | | | | | | r2=0.84 |
| Relative Weight (Fall) | | | | | | | | | | |
| Stock | 97 | 97 | 116 | 102 | 102 | 98 | 91 | 111 | 97 | 95 |
| Quality | 99 | 99 | 102 | 94 | 103 | 93 | 93 | 93 | 90 | 103 |
| Preferred | 97 | 99 | 102 | 94 | 103 | 92 | 91 | 91 | 91 | 91 |
| Memorable | 96 | 95 | 98 | 93 | 99 | 86 | 96 | 88 | 77 | 93 |
| Trophy | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Fishing Success (Black Crappie only) | | | | | | | | | | |
| Relative | 0.94 | 1.11 | 0.79 | 1.08 | 2.07 | 0.69 | 0.42 | 0.54 | 0.56 | 0.62 |
| Catch Rate | | | | | | | | | | |
| Relative Harvest | 0.51 | 0.76 | 0.44 | 0.59 | 1.03 | 0.28 | 0.23 | 0.26 | 0.2 | 0.21 |
| BC % Harvested | 47 | 34 | 48 | 45 | 49 | 59 | 41 | 50 | 65 | 68.8 |
| BC Mn Wt | 0.79 | 0.94 | 0.82 | 0.83 | 0.73 | 0.82 | 0.77 | 0.78 | 0.78 | 0.78 |
| Value of Fishery (Trip Expenditures in Thousands) | | | | | | | | | | |
| All Crappie | 1,454 | 2,001 | 2,677 | 1,342 | 2,073 | 2,515 | 3,080 | 1,805 | 1,947 | 1,189 |

Redear Sunfish

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------------------------------------------------------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| Recruitment (Trap Net) | | | | | | | | | | |
| Age-1 CPUE | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Substock CPUE | 12.6 | 1.7 | 0.3 | 0.3 | 0.4 | 7.6 | 2.7 | 18.5 | 9.1 | 0.2 |
| Total CPUE | 14.5 | 2.5 | 1 | 1.5 | 1.4 | 8.5 | 3.3 | 19.2 | 10 | 0.8 |
| Net Nights | 110 | 112 | 111 | 111 | 112 | 111 | 112 | 112 | 110 | 112 |
| n | 1,595 | 281 | 110 | 167 | 153 | 940 | 367 | 2,151 | 1,094 | 92 |
| Spring Density (Electrofishing Survey) | | | | | | | | | | |
| PSD | 62 | 66 | 62 | 71 | 89 | 69 | 91 | 87 | 81 | 73 |
| RSD Preferred | 28 | 16 | 24 | 28 | 52 | 38 | 48 | 42 | 37 | 39 |
| CPUE | 29.3 | 27.5 | 46.2 | 17.3 | 36.3 | 39.2 | 9.8 | 50.2 | 20.8 | 73.3 |
| CPUE ≥ Stock | 25.2 | 16.7 | 41.5 | 14.8 | 35.3 | 38.5 | 9.7 | 43.7 | 17.7 | 66.8 |
| CPUE ≥ Preferred | 7.2 | 2.7 | 9.8 | 4.2 | 18.5 | 14.5 | 4.7 | 21.2 | 6.5 | 26.2 |
| n | 176 | 165 | 277 | 104 | 218 | 235 | 59 | 301 | 125 | 440 |
| Spring Hours | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Growth | | | | | | | | | | |
| Mean TL at Age-1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Mean TL at Age-3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Mortality | | | | | | | | | | |
| Total Mortality | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Angling Pressure (Angler Hours per Acre) | | | | | | | | | | |
| Sunfish | 0.39 | 0.57 | 0.4 | 0.3 | 0.59 | 0.66 | 0.69 | 0.42 | 0.69 | 0.61 |
| Fishing Success (Redear Sunfish only) *Catch rate for anglers seeking redear sunfish | | | | | | | | | | |
| Relative Catch Rate | 0.95 | 0.85 | 0.2 | 0.65 | 0.5 | 0.52 | 0.27 | 0.41 | 0.86* | 0.24* |
| Relative Harvest Rate | 0.64 | 0.53 | 0.17 | 0.48 | 0.38 | 0.31 | 0.23 | 0.3 | 0.61* | 0.12* |
| Redear Mean Weight | 0.52 | 0.51 | 0.42 | 0.47 | 0.51 | 0.66 | 0.48 | 0.41 | 0.5 | 0.4 |
| Redear % Released | 30 | 32 | 24 | 34 | 24 | 37 | 27 | 35 | 29 | 49 |
| Value of Fishery (Trip Expenditures in Thousands) | | | | | | | | | | |
| Sunfish | 112.9 | 168.6 | 111.3 | 60.4 | 179.6 | 327.9 | 212.3 | 193 | 379 | 9.2 |

FISHERY FORECAST

Angler redear sunfish catch and harvest rates have been inconsistent from year to year on Kentucky Reservoir and showed a moderate decline since 2001. This trend along with increased sunfish fishing pressure since 1999 and a slight decline in CPUE through electrofishing surveys have resulted in management concerns for redear sunfish. Redear sunfish have the potential to be over-harvested due to concentration of their spawning areas. Once these areas have been located anglers tend to harvest the majority of the fish caught and can negatively impact populations in specific areas. Since the redear population on Kentucky Reservoir has recently become popular and redear sunfish are not multiple spawners, the species was prone to over-harvest. Since 2003 the angler harvest of redear sunfish has declined every year in the northern section of Kentucky Reservoir following the boom year of 2000 (5.8 redear sunfish harvested per hour). As expected by anglers, over 98% (84% in 2015) of the redear sunfish were caught in the northern section and relative catch rates were higher in the northern section 0.37 vs. 0.12(0.41-north vs 0.59-south in 2015).

Redear densities were down from historic data and sub-stock CPUE has decreased during trap net surveys unlike the previous two years. The CPUE of preferred size fish has also increased above the 10-year average during two of the last three years. Electrofishing catch rates were variable in the three sections (Section I: 82/hour and RSD9 - 60; Section II: 55.5/hour and RSD9 - 62; Section III: 82.5/hour and RSD9 - 4).

The trip expenditure data were the same as for bluegill. There were only four angler interviews directed at redear specific anglers therefore the value of the fishery is reduced.

MANAGEMENT RECOMMENDATIONS

Provide redear sunfish information to the angler and media to increase opportunity for this species. The 30 fish creel limit for redear sunfish implemented in 2008 was reduced to a 20 fish creel limit in 2013.

Bluegill

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------------------------------------------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| Recruitment (Trap Net) | | | | | | | | | | |
| Age-1 CPUE | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Substock CPUE | 18.1 | 4.3 | 2.9 | 5.2 | 3.5 | 13.6 | 11.4 | 11.8 | 12.6 | 4.9 |
| Total CPUE | 29.4 | 9.7 | 7.7 | 8.1 | 7.4 | 20.7 | 15.9 | 20.7 | 16.9 | 11.6 |
| Net Nights | 110 | 112 | 111 | 111 | 112 | 111 | 112 | 112 | 110 | 112 |
| n | 3233 | 1086 | 852 | 901 | 827 | 2,299 | 1,775 | 2,318 | 1,863 | 1,298 |
| Spring Density (Electrofishing Survey) | | | | | | | | | | |
| PSD | 30 | 29 | 36 | 40 | 54 | 46 | 53 | 47 | 47 | 36 |
| RSD Preferred | 2 | 5 | 3 | 2 | 6 | 6 | 11 | 5 | 2 | 2 |
| CPUE | 133.5 | 159.7 | 121 | 89.7 | 97.2 | 76.7 | 40.3 | 113.5 | 86.3 | 237.2 |
| CPUE \geq Stock | 111 | 115 | 118.2 | 83 | 89.8 | 74.8 | 38 | 109.8 | 70 | 207.3 |
| CPUE \geq Preferred | 2.2 | 5.3 | 4 | 1.8 | 5.2 | 4.2 | 4 | 5.5 | 1.7 | 5.2 |
| n | 801 | 958 | 726 | 538 | 583 | 460 | 242 | 681 | 518 | 1,423 |
| Spring Hours | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Angling Pressure (Angler Hours per Acre) | | | | | | | | | | |
| Sunfish | 0.46 | 0.39 | 0.57 | 0.3 | 0.59 | 0.66 | 0.69 | 0.42 | 0.69 | 0.61 |
| Fishing Success (Bluegill only) | | | | | | | | | | |
| Relative Catch Rate | 3.27 | 6.29 | 5.28 | 6.85 | 4.36 | 3.01 | 2.75 | 3.57 | 3.97 | 3.54 |
| Relative Harvest Rate | 1.75 | 3.70 | 2.99 | 4.03 | 3.05 | 1.36 | 2.07 | 1.83 | 2.43 | 2.02 |
| Mean Weight | 0.27 | 0.28 | 0.25 | 0.27 | 0.38 | 0.4 | 0.43 | 0.44 | 0.38 | 0.3 |
| Percent Released | 57 | 41 | 56 | 54 | 44 | 61 | 40 | 58 | 60 | 49 |
| Value of Fishery (Trip Expenditures in Thousands) | | | | | | | | | | |
| Bluegill | 112.9 | 168.6 | 111.3 | 60.4 | 179.6 | 327.9 | 212.3 | 193 | 379 | 244.2 |

FISHERY FORECAST

Historically the bluegill fishery has been typical of bluegill fisheries seen in other west Tennessee reservoirs. Catch rates were high but fish quality was low. In 2011 through 2014, RSD8 was the highest recorded although catch rates declined (cooler temps). However, the CPUE for bluegill with electrofishing gear was not representative of the population density. Bluegill comprised 93.5% of the estimated sunfish caught by anglers and the majority of the fishing pressure occurred in the northern section (86%). Sunfish catch and harvest rates were higher in the northern section also (northern: 4.93 and 3.07(3.47 and 1.79 in 2015) compared to southern: 3.73 and 1.79 (4.30 and 1.53 in 2015)).

Anglers spent \$3.68 per hour fishing for sunfish and were willing to spend an additional 35% fishing for sunfish on Kentucky Reservoir. The total value of the sunfish fishery was estimated at \$377,990.

MANAGEMENT RECOMMENDATIONS

No recommendations are necessary.

Sauger

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------------------------------------------|------|--------------|---------------|-------------------------|----------------|---------------|-------|----------------|------|----------------|
| Recruitment(Gillnet) | | PW/ | PW/ | | | | | | | |
| | | Duck | Duck | | | | | | | |
| Age-1 CPUE | -- | 1.4 | 2.5/0 | 1.1/0.1 | 4.6 | 0.2 | 1.52 | 26.6 | -- | 0.08 |
| Substock CPUE | 0 | 0 | 0.1/0.0 | 0.0/ 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Net Hours | 15.3 | 22.5 | 17.8/ 71.7 | 9.6/ 42.8 | 30.2 | 10 | 5.25 | 5.1 | 18.4 | 7.8 |
| n | 124 | 64 | 114 /94 | 89/ 53 | 154 | 31 | 40 | 191 | 165 | 116 |
| Density | | | | | | | | | | |
| PSD | 84 | 69 | 54/89 | 87/94 | -- | -- | - | 40 | -- | 34 |
| RSD Preferred | 11 | 14 | 19/69 | 34/40 | -- | -- | -- | 22 | -- | 20 |
| CPUE | 8.1 | 2.9 | 6.0/ 1.3 | 9.0/1.3 | 4.9 | 3.2 | 9.4 | 37.6 | 9 | 8.3 |
| CPUE ≥ Stock | 8.1 | 2.9 | 5.9/ 1.3 | 9.0/1.3 | 4.9 | 3.2 | 9.4 | 37.6 | 9 | 8.3 |
| CPUE ≥ MSL-14" 15" 2014 | 2.8 | 0.9 | 2.6/ 1.1 | 5.9/1.0 | 0.2 | 0.6 | 1.9 | 5.2 | 3.9 | 1.6 |
| Growth | | | | | | | | | | |
| Mean TL at Age-1 | 298 | 298 | 274/ 270 | 279/ 290 | 273 | 276 | 295 | 281 | -- | 278 |
| Mean TL at Age-3 | 394 | 394 | 396/ 396 | 367 /415 | 384 | 480 | 381 | 366 | -- | 415 |
| Mean TL at Age 5 | -- | -- | --/372 | 447/ 413 | -- | -- | -- | -- | -- | -- |
| Mortality | | | | | | | | | | |
| Total Mortality | | 69% r2:92 | | 69%/24% r2:75/ r2:26 | 83% r2=0.79 | 63% r2=0.4 | -- | 70% R2=0.96 | | 72% r2=0.99 |
| Wr (Winter) | | | | | | | | | | |
| Stock | 101 | 87 | 100/ 94 | 97/ 92 | 90 | 89 | -- | -- | 130 | 87 |
| Quality | 99 | 93 | 96/ 100 | 96/ 101 | 99 | 100 | -- | -- | 96 | 86 |
| Preferred | 96 | 94 | 97/ 100 | 102/ 94 | 106 | 107 | -- | -- | 95 | 100 |
| Memorable | | | | | | | | | | |
| Trophy | | | | | | | | | | |
| Angling Pressure (Angler Hours/Acre) | | | | | | | | | | |
| Sauger | 0.9 | 1.17 | 0.91 | 0.7 | 0.07 | 0.65 | 0.11 | 0.24 | 0.1 | 0.16 |
| Fishing Success | | | | | | | | | | |
| Catch Rate | 1.28 | 0.48 | 0.71 | 0.6 | 0.33 | 0.57 | 0.57 | 0.58 | 0.62 | 0.81 |
| Harvest Rate | 0.48 | 0.21 | 0.32 | 0.31 | 0.19 | 0.38 | 0.2 | 0.18 | 0.3 | 0.27 |
| Mean Weight | 1.27 | 1.29 | 1.5 | 1.34 | 1.18 | 1.21 | 1.65 | 1.46 | 1.74 | 1.49 |
| % Released | 57 | 60 | 58 | 45 | 63 | 32 | 68 | 71 | 58 | 69.7 |
| Value of Fishery (Trip Expenditures in Thousands) | | | | | | | | | | |
| Sauger | 233 | 365 | 300 | 281 | 44.5 | 417.9 | 171.8 | 286.6 | 62.9 | 82.4 |

FISHERY FORECAST

The sauger fishery provided winter fishing opportunity for anglers and the population continued to persevere, regardless of fishing pressure, discharge, or water levels. Fishing pressure appeared to be low, however the majority of that fishing pressure occurred in the area below the dam. In addition, a large percentage of the sauger population migrated below the dam to spawn. The fact high fishing pressure and the sauger population occur in the same area resulted in high total mortality rates seen with this population (average 72% in the last 10 years). Recruitment to catchable size increased in 2014 and 2015 and exceeded the 10-year average - possibly due to stocking sauger in 2013 (120,000) and 2014 (205,197), but fell below the 10 year average in 2016. This reduction may be attributed to no stocking taking place after 2015. The CPUE of stock size fish was acceptable and the catch rate of fish ≥ 15 -inches reduced slightly.

Creel data revealed that the majority of the sauger harvested were larger than 400 mm (71%) (in 2006, 9% of the sauger measured were less than 14-inches). Catch rates increased slightly in 2012-2015, but in 2016 increased above historic levels.

The total fishing pressure was in the southern section. Historical data revealed harvest rates were higher in the southern section and percent effort was greater in the southern section. But, larger fish were harvested by anglers in the northern section. During the last several years, discharge through the gates has limited sauger fishing below Pickwick Dam.

Genetic analysis was conducted on Kentucky Reservoir in 2006 to determine if genetic differences existed between the sauger population at Pickwick and the sauger population at Duck River. Creel data has shown that sauger harvested at Duck River were larger than those harvested at Pickwick. Electrophoretic results showed very little variation between the two populations. In fact there was little variation between the sauger populations sampled in other Tennessee reservoirs. The size differences harvested by anglers were attributed to lower fishing pressure and increased numbers of larger sauger in the Duck River area.

Anglers spent \$4.84 (\$1.27 increase from 2015) per hour fishing for sauger and were willing to spend an additional 42% (23% decrease from 2015) to fish for sauger on Kentucky Reservoir. The total value of the sauger fishery was estimated at \$143,410.

MANAGEMENT RECOMMENDATIONS

Sauger fishing has been poor over the last several years with low recruitment and low densities of adult fish. However, the angler viewpoint of the sauger fishery is still positive as indicated by the willingness to spend an additional 42% to fish for sauger.

A 15-inch minimum size limit with a 10 fish per day creel limit was implemented on March 1, 2014. Increasing the size limit will increase the protection of spawning females from 14% at 14" to 31% at 15". The increased protection for adult females may help improve survival and recruitment of age 1 fish into the population. In addition, 45,000, 128,426, 0, 120,956, 205,197, and 133,294 sauger were stocked below Pickwick Dam in 2010, 2011, 2012, 2013, 2014, and 2015 respectively. However, without a minimum size limit, the sauger fishery would be non-existent in Kentucky Reservoir.

Blue Catfish

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------------------------------------------|------|------|------|----------|-------|-------|----------|-------|----------|-------|
| Recruitment (Gillnet Survey) PW/Duck | | | | | | | | | | |
| Age-1 CPUE | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Substock CPUE | -- | -- | 0.3 | 0.3/0.0 | -- | 0.1 | -- | -- | -- | -- |
| Net Hours | 15.3 | 22.5 | 89.5 | 9.6/42.8 | 30.2 | 10 | -- | 5.1 | 18.4 | 7.8 |
| n | -- | 1 | 24 | 3/0 | 0 | 5 | -- | 0 | 1 | 3 |
| Angling Pressure (Angler Hours per Acre) | | | | | | | | | | |
| Catfish | 3.3 | 2.5 | 3.2 | 2.2 | 4.04 | 4.18 | 2.86 | 2.07 | 2.63 | 1.91 |
| Fishing Success | | | | | | | | | | |
| Catch Rate | 0.52 | 0.76 | 0.81 | 1 | 1 | 1.16 | 1.52 | 1.04 | 1.27 | 0.75 |
| Harvest Rate | 0.41 | 0.60 | 0.69 | 0.79 | 0.73 | 0.72 | 1.13 | 0.8 | 0.93 | 0.62 |
| % Released | 34 | 28 | 22 | 25 | 32 | 36 | 24 | 24 | 25 | 20 |
| Mean Weight | 1.92 | 2.24 | 2.53 | 1.42 | 2.06 | 2.36 | 2.3 | 2.01 | 2.9 | 1.92 |
| Value of Fishery (Trip Expenditures in Thousands) | | | | | | | | | | |
| Catfish | 594 | 597 | 866 | 455 | 1,500 | 1,797 | 2,177.80 | 974.5 | 1,288.60 | 647.9 |

FISHERY FORECAST

The forecast for the catfish fishery remained good with catch rates increasing over historic data. Angler pressure continued to be high and catch rates remained acceptable. Over 56% of the catfish caught were blue catfish, followed by channel catfish (44%) and flathead catfish (<1%). The majority of the catfish pressure was in the southern section (59%), and catch rates were similar between sections (all catfish – 1.35 and 1.08 catch rate for the northern and southern section, respectively).

Anglers spent \$3.13 fishing for catfish and were willing to spend an additional 37% (22% less than 2015) to fish for catfish on Kentucky Reservoir. The total value of the catfish fishery was estimated at \$1,028,350. Trip expenditures for the northern section and the southern section were \$2.79 (\$.55 increase from 2015) and \$3.34 (\$.09 reduction from 2015), respectively.

MANAGEMENT RECOMMENDATIONS

No recommendations are necessary.

Striped Bass

| | PW / Duck | | | | | | | | | |
|----------------------------------------------------------|-----------|------|-------|----------|------|------|------|------|-------|------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| Net Hours | 15.3 | 22.5 | 17.7 | 9.6/42.8 | 30.2 | 10 | 5.25 | 5.1 | 18.4 | 7.8 |
| n | 17 | 13 | 1 | 6/0 | 29 | 8 | 1 | 2 | 2 | 3 |
| Recruitment (Gillnet Survey) | | | | | | | | | | |
| Substock CPUE | 0.1 | 0.2 | -- | 6/0 | 0 | 0.1 | -- | -- | -- | -- |
| Age1 CPUE | | | -- | 1 | | -- | -- | -- | -- | -- |
| Density | | | | | | | | | | |
| PSD | -- | 100 | -- | -- | | -- | | -- | -- | -- |
| RSD Preferred | -- | 0 | -- | -- | | -- | | -- | -- | -- |
| CPUE | 1.2 | 0.5 | -- | 0.8/0 | 1 | 0.8 | | -- | -- | 0.1 |
| CPUE ≥ Stock | 1.2 | - | -- | 0.1/0 | 1 | 0.7 | | -- | -- | 0.1 |
| CPUE ≥ MSL (15") | -- | -- | -- | 0/0 | 0 | 0 | | -- | -- | -- |
| Growth | | | | | | | | | | |
| Mean TL at Age-1 | -- | -- | 291 | 271 | | -- | | -- | -- | -- |
| Mean TL at Age-3 | -- | -- | -- | -- | | -- | | -- | -- | -- |
| Mortality | | | | | | | | | | |
| Total Mortality | -- | -- | -- | | | -- | | -- | -- | -- |
| Angling Pressure (Angler Hours per Acre) | | | | | | | | | | |
| Striped Bass | 0.13 | <0.1 | 0.3 | 0.08 | 0.03 | 0.05 | 0.2 | <0.1 | 0.03 | 0.06 |
| Fishing Success (Striped Bass only) | | | | | | | | | | |
| Catch Rate | 0.17 | 0.33 | 0.62 | 0.59 | 0.58 | 0.14 | 0.02 | 0.27 | 0.33 | 0.32 |
| Harvest Rate | 0.06 | 0.21 | 0.16 | 0.42 | 0.33 | 0 | 0 | 0.04 | 0.11 | 0.22 |
| Mean Weight | 10.8 | 6.56 | 10.96 | 7.8 | 4.4 | 3.9 | 5.05 | 2.96 | 15.44 | 7.29 |
| Percent released | 69 | 42 | 75 | 43 | 51 | 81 | 80 | 80 | 77 | 27.5 |
| Value of Fishery (Trip Expenditures in Thousands) | | | | | | | | | | |
| Striped Bass | 24.7 | 13.5 | 74.5 | 15 | 24.9 | 13 | 14.4 | 16.6 | 29.9 | 63.9 |

FISHERY FORECAST

The fishery for striped bass and Cherokee Bass were dependent upon either natural reproduction or migration from other waters stocked with these species. Striped bass or Cherokee Bass have not been stocked in Kentucky Reservoir since the late 1980's. Striped bass apparently produced a good year class in 2002 with good densities of age 1 fish in the population in 2003 and over 4 fish collected per hour in winter surveys, 2004. The majority of striped bass collected in 2011 were stock size indicating a successful spawn in 2010.

MANAGEMENT RECOMMENDATIONS

No recommendations are necessary.

Hybrid Striped Bass

| | | | PW / Duck | | | | | | | |
|---------------------------------------------------|------|------|-----------|----------|------|------|------|------|------|------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| Net Hours | 15.3 | 22.5 | 17.8 | 9.6/42.8 | 30.2 | 10 | 5.25 | 5.1 | 18.4 | 7.8 |
| n | 1 | 5 | 0 | 0/0 | 0 | 2 | 1 | 0 | 1 | 5 |
| Recruitment (Gillnet Survey) | | | | | | | | | | |
| Substock CPUE | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Density | | | | | | | | | | |
| PSD | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| RSD Preferred | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| CPUE | 0.6 | 0.2 | -- | -- | -- | -- | -- | -- | -- | -- |
| CPUE ≥ Stock | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| CPUE ≥ MSL (15") | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Growth | | | | | | | | | | |
| Mean TL at Age-2 | -- | -- | 407 | -- | -- | -- | -- | -- | -- | -- |
| Mortality | | | | | | | | | | |
| Total Mortality | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Angling Pressure (Angler Hours per Acre) | | | | | | | | | | |
| Hybrid Striped Bass | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Fishing Success (Hybrid Striped Bass only) | | | | | | | | | | |
| Catch Rate | -- | -- | -- | 0 | -- | -- | 0 | 0 | -- | -- |
| Harvest Rate | -- | -- | -- | 0 | -- | -- | 0 | 0 | -- | -- |
| Mean Weight | 16.7 | -- | -- | 0 | -- | 1.07 | 2.45 | -- | -- | -- |
| Percent released | 0 | -- | -- | 0 | -- | 63 | 33 | -- | -- | -- |

White Bass

| | PW | PW | PW | PW/Duck | PW | | | | | |
|----------------------------------------------------------|------|------|------|----------|------|-------|-------|-------|-------|-------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| Net Hours | 15.3 | 22.5 | 17.8 | 9.6/42.8 | 30.2 | 10 | 5.25 | 5.1 | 18.4 | 7.8 |
| n | 60 | 111 | 95 | 56/2 | 25 | 51 | 46 | 7 | 30 | 66 |
| Recruitment (Gillnet Survey) | | | | | | | | | | |
| Substock CPUE | -- | 0 | 0 | 0 | 0/0 | 0 | 0 | 0 | 0 | 0 |
| PSD | 97 | 96 | 96 | 100/100 | | 100 | 100 | 71 | 100 | 97 |
| RSD Preferred | 92 | 37 | 52 | 79/0 | | 86 | 65 | 57 | 87 | 90 |
| CPUE | 8.6 | 5.0 | 5.9 | 6.4/0.1 | 0.8 | 5.5 | 8.1 | 1.4 | 1.6 | 3.9 |
| CPUE ≥ Stock | 8.6 | 5 | 5.9 | 6.4/0.1 | 0.8 | 5.5 | 8.1 | 1.4 | 1.6 | 3.9 |
| CPUE ≥ Preferred | 7.4 | 2 | 3.1 | 5.1/0.1 | 0.4 | 4.9 | 4.9 | 0.8 | 1.4 | 3.5 |
| Growth | | | | | | | | | | |
| Mean TL at Age-2 | -- | -- | 307 | -- | | -- | -- | -- | -- | -- |
| Mean TL at Age-3 | -- | -- | 350 | -- | | -- | -- | -- | -- | -- |
| Relative Weight | | | | | | | | | | |
| Stock | -- | 87 | -- | --/-- | -- | -- | -- | -- | -- | 96 |
| Quality | -- | 93 | 94 | 94/-- | 112 | -- | -- | -- | -- | 80 |
| Preferred | -- | 92 | 99 | 100/107 | 94 | -- | -- | -- | -- | 101 |
| Memorable | -- | 90 | -- | -- | 92 | -- | -- | -- | -- | 98 |
| Trophy | | | -- | -- | -- | -- | -- | -- | -- | -- |
| Mortality | | | | | | | | | | |
| Total Mortality | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Angling Pressure (Angler Hours per Acre) | | | | | | | | | | |
| White Bass | 0.23 | 0.26 | 0.33 | 0.29 | NA | 0.18 | 0.13 | 0.19 | 0.17 | 0.29 |
| Fishing Success (White Bass only) | | | | | | | | | | |
| Catch Rate | 1.2 | 2.09 | 1.72 | 1.64 | NA | 4.06 | 2.11 | 2.67 | 2.39 | 1.37 |
| Harvest Rate | 0.65 | 0.76 | 0.71 | 0.42 | NA | 2.55 | 1.12 | 1.59 | 1.54 | 0.86 |
| Mean Weight | 0.75 | 0.85 | 0.6 | 0.68 | 0.79 | 1.1 | 1.11 | 55 | 63 | 1.31 |
| Percent Released | 64 | 72 | 69 | 61 | 65 | 54 | 65 | 0.99 | 1.2 | 59.7 |
| Value of Fishery (Trip Expenditures in Thousands) | | | | | | | | | | |
| White Bass | 54 | 58 | 82 | 48 | NA | 119.6 | 200.8 | 169.3 | 119.8 | 125.7 |

FISHERY FORECAST

The white bass fishery was dependent on discharge and water levels at the spawning areas (usually below dams). Anglers seeking this species experienced a boom-bust type fishery and recruitment to older ages was limited. In 2013 and 2014, total CPUE exceeded historic data and preferred size fish appeared to be abundant; 87% of the fishing pressure for white bass was in the southern section. Anglers seeking this species spent \$4.04 (\$0.22 increase from 2015) per hour fishing for this species and were willing to spend an additional 40% (35% decrease from 2015) to fish for the true basses on Kentucky Reservoir. The total value of the fishery was estimated at \$210,270.

MANAGEMENT RECOMMENDATIONS

The creel limit was reduced to 15 in 2005. Work with the Tennessee Valley Authority to identify critical spawning periods of white bass and identify discharge rates and water levels necessary for successful white bass spawning and recruitment.

Continue with the 15 fish creel limit for white bass.

Yellow Perch

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------|------|------|------|------|------|------|------|------|------|------|
| Recruitment | | | | | | | | | | |
| Substock CPUE | | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Spring Density (n) | | 3 | | 1 | | | | | 4 | 6 |
| PSD | -- | 80 | -- | 40 | -- | -- | -- | | -- | 100 |
| RSD Preferred | -- | 60 | -- | 40 | -- | -- | -- | | -- | 100 |
| CPUE | -- | 1.1 | -- | 1.2 | -- | -- | -- | | -- | 1 |
| CPUE \geq Stock | -- | 0.6 | -- | 0.8 | -- | -- | -- | | -- | 1 |
| | | | | | | | | | | |
| Fishing Success | | | | | | | | | | |
| Catch Rate | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Harvest Rate | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| % Released | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Mean Weight | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

FISHERY FORECAST

Reports have been received that yellow perch were sought by a small percentage of anglers and larger fish were being caught in the mouth of major creeks. Reports have been received that fish up to one pound have been harvested. However, the fishery is nearly non-existent in the reservoir and the majority of the fish collected during electrofishing surveys were less than 10-inches

Gizzard Shad

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------|------|------|------|-------|-------|------|------|------|------|------|
| Fall Electro Hours | 8.96 | 7.71 | 7.89 | 6.68 | 4.08 | 8.02 | 7.3 | 6.79 | 6.73 | 7.56 |
| Recruitment | | | | | | | | | | |
| CPUE < 150 mm | 21.5 | 2.1 | 24.7 | 68 | 32.6 | 6 | 17.9 | 9.7 | 45.6 | 5.3 |
| CPUE ≥ 280 mm | 5.3 | 0.1 | 4.5 | 31 | 1.6 | 3.6 | 50.4 | 6 | 4.3 | 0.5 |
| Density | | | | | | | | | | |
| Fall total CPUE | 99.2 | 62.1 | 95.8 | 118.3 | 127.9 | 61.5 | 74.4 | 53.2 | 99.7 | 35.8 |
| Fall CPUE Substock | 62.8 | 25.6 | 43.1 | 87.2 | 66.2 | 14.8 | 24 | 6.4 | 58.1 | 18.2 |
| Fall CPUE ≥ Stock | 36.4 | 36.5 | 52.7 | 31 | 61.7 | 46.8 | 50.4 | 46.8 | 41.6 | 22.6 |
| Fall total collected (n) | 611 | 481 | 540 | 694 | 428 | 449 | 615 | 318 | 702 | 299 |

Discussion

CPUE of adult and YOY gizzard shad has fluctuated in the 21st century with apparent high densities in 2015. CPUE was varied as sampling progressed upstream (5.5, 61.2, and 47.2 per hour in Sections 1, 2, 3, respectively (144.9, 55.3, and 98.0 per hour respectively in 2015)). Approximately 61, 44, and 66 % of the gizzard shad collected in sections 1, 2 and 3, respectively were substock. Due to the presence of Asian carp, the 2016 Wr for gizzard shad in sections 1, 2, and 3 were 75, 81, and 100 for stock size fish, respectively (91, 89, and 85 in sections 1, 2, and 3 respectively in 2015 and 86, 88, and 92 in 2014).

Threadfin Shad

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------|-------|------|------|------|-------|-------|-------|------|------|------|
| Fall Electro Hours | 8.96 | 7.71 | 7.89 | 6.68 | 4.08 | 8.02 | 7.3 | 6.79 | 6.73 | 7.56 |
| Density | | | | | | | | | | |
| Fall CPUE < 75 mm | 73.9 | 96.2 | 18.5 | 62.6 | 121 | 53 | 47.3 | 46.2 | 30.3 | 40 |
| Fall Total CPUE | 117.9 | 97.2 | 48.8 | 67.8 | 133.5 | 108.2 | 108.2 | 55.7 | 34.8 | 35.3 |
| Fall Total collected (n) | 883 | 847 | 317 | 476 | 548 | 759 | 671 | 325 | 252 | 401 |

Discussion

As with gizzard shad, CPUE of threadfin shad fluctuated as sampling progressed upstream (30.6, 72.3, and 18.3 per hour in Section 1, 2, and 3 respectively in 2016). Size distributions were similar between sections and threadfin shad were collected at preferred sizes for predators. The over-all density of threadfin shad was similar to the 10-year average.

Other Species Collected

| Species | Number Collected | Gear | Value |
|-----------------------|---------------------|-----------------------|----------------|
| Blue catfish | 1 | Sauger gill net PW | 0.1/hour |
| | 2 | Gill Net PWT Targeted | 0.2/hour |
| Blue Sucker | 2 | Gill Net PWT Targeted | 0.2/hour |
| Channel Catfish | 13 | Trap Net | 0.1/net night |
| | 5 | Gill Net PWT | 0.5/hour |
| | 20 | Sauger gill net PW | 2.6/hour |
| Freshwater Drum | 9 | Trap Net | 0.1/net night |
| | 12 | Sauger gill net PW | 1.5/hour |
| | 2 | Gill Net PWT Targeted | 0.2/hour |
| Gizzard Shad | 33 | Trap Net | 0.3/net night |
| Golden Redhorse | 1 | Gill Net PWT Targeted | 0.1/hour |
| Golden Shiner | 1 | Gill Net PWT Targeted | 0.1/hour |
| | 9 | Sauger gill net PW | 1.2/hour |
| Hybrid striped bass | 1 | Gill Net PWT Targeted | 0.1/hour |
| | 4 | Sauger gill net PW | 0.5/hour |
| Logperch | 3 | Sauger gill net PW | 0.4/hour |
| Longear Sunfish | 229 | Trap Net | 2.0/net night |
| Orangespotted Sunfish | 31 | Trap Net | 0.3/net night |
| River Redhorse | 3 | Gill Net PWT Targeted | 0.3/hour |
| | 12 | Sauger gill net PW | 1.5/hour |
| Redbreast Sunfish | 5 | Spring electrofishing | 0.8/hour |
| Redear Sunfish | 92 | Trap Net | 0.8/net night |
| Shorthead redhorse | 1 | Sauger gill net PW | 0.1/hour |
| Skipjack Herring | 36 | Sauger gill net PWT | 4.7/hour |
| | 58 | Gill Net PWT Targeted | 6.0/hour |
| Smallmouth Bass | 4 | Gill Net PWT Targeted | 0.4/hour |
| | 3 | Sauger gill net PW | 0.4/hour |
| Spotted Bass | 24 | Spring Electrofishing | 4.0/hour |
| | 31 | Fall Electrofishing | 4.1/hour |
| | 2 | Trap net | <0.1/net night |
| Spotted Gar | 1 | Gill Net PWT Targeted | 0.1/net night |
| Spotted Sucker | 1 | Gill Net PWT Targeted | 0.1/net night |
| | 2 | Sauger gill net PW | 0.3/hour |
| Striped Bass | 1 | Gill Net PWT Targeted | 0.1/hour |
| | 2 | Sauger gill net PW | 0.3/hour |
| Threadfin Shad | 1,108 | Trap Net | 9.9/net night |
| Walleye | 3 | Sauger gill net PW | 0.1/hour |
| Warmouth | 64 | Trap Net | 0.6/net night |
| White Bass | 34 | Targeted gill net PWT | 1.8/hour |
| | 32 | Gill Net PWT Targeted | 3.3/hour |
| | 1 | Trap net | <0.1/net night |
| Yellow Bass | 10 | Gill Net PWT Targeted | 1.0/hour |
| | 56 | Sauger gill net PW | 7.2/hour |
| Yellow Perch | 6 | Spring electrofishing | 1.0/hour |
| | 4 | Fall Electrofishing | 0.6/hour |
| | 2 | Trap net | <0.1/net night |
| | 1 | Sauger gill net PW | 0.1/hour |

Trap Net = 112 NN
Spring Electro – 6.0 hours

Targeted gill net – 9.63 hours
Fall Electro – 7.56 hours

Sauger gill net – 7.75 hours

2016 Water Quality Monitoring

The Tennessee valley experienced drought conditions in 2007, 2008 and summer – fall 2010. Drought conditions also persisted in summer, 2011 and 2012. These conditions coupled with the USACOE work on Wolf Creek Dam (Cumberland Lake) and the Center Hill Dam resulted in reduced flows through the Cumberland River system. While the work at Center Hill Dam continues, the Wolf River Dam project was completed in 2015. The conditions on Barkley Reservoir also impacted Kentucky Reservoir since the two reservoirs are connected via a canal at TNRM 25.0.

In 2016, summer air and water temperatures were average when compared to historical records.

JUNE

Dissolved oxygen levels fell below 4.0 ppm below 36' at station 1, below 18' at station 2, below 15' at station 3, below 30' at station 4, below 12' at station 5, and below 18' at station 6. Water temperatures fell between 29.0 and 29.6 °C at the surface (warmer temps at most southern stations), which more than a full degree warmer than last year. Secchi disc, pH, conductivity, and alkalinity readings averaged 104 cm (2015 - 65 cm), 7.9 (2015-7.6), 33 umhos/cm (2015 -151 umhos/cm), and 45 mg/l (2015 - 54 mg/l).

JULY

Dissolved oxygen levels fell below 4.0 ppm below 30' at station 1, below 21' at station 2, below 12' at station 3, below 18' at station 4, and below 15' at station 6. Dissolved oxygen levels were below acceptable levels at all depths at station 5. Water temperatures fell between 30.5 and 31.2 °C at the surface. Secchi disc, pH, conductivity, and alkalinity readings averaged 119 cm (2015-79 cm), 7.7 (2015-7.8), 126 umhos/cm (2015-155 umhos), and 41 mg/l (2015- 44 mg/l).

AUGUST

Dissolved oxygen levels fell below 4.0 ppm below 57' at station 1, below 15' at station 2, below 30' at station 3, below 15' at station 4, below 33' at station 5, and did not fall below acceptable levels at station 6. Water temperatures varied very little between surface and bottom readings at all stations (<1°C). Secchi disc, pH, conductivity, and alkalinity averaged, 93 cm (2015 - 80 cm), 7.7 (2015-7.7), 127 umhos/cm (2015 - 115 umhos/cm), and 59 mg/l (2015 - 56 mg/l).

Sampling Stations

TNRM 62.4
BSRM 2.0
TNRM 100.5
TNRM 135.6
TNRM 159.0
TNRM 189.9

Pickwick Reservoir - 2016

Description

Area (acres): TN: 6,159; TOTAL: 43,100 **Mean Depth (feet):** 21' **Shoreline (miles):** Total - 496
Counties: Hardin **Reservoir Length:** TN – 6 miles; Total: 52 miles **Drainage Area:** 32,820 sq.mile
Total Fishing Effort (angler hours): 83,352 **Total Value by Anglers:** \$858,580
Summer Pool: 414.0 MSL **Winter Pool:** 408.0 MSL **Impounded:** 1938

Management Strategies:

Striped Bass/Hybrid Striped Bass: 15" MLL, 2 fish – 1987

Crappie: 10 fish creel limit – 1989

Redear Sunfish: 20 fish creel limit - 2008

9" MLL, 30 fish creel – 1997

SMB: 15" MLL - 2003 – 2007

LMB: Creel limit reduced from 10 to 5 -1997

18" MLL – 2008; 15" MLL – 2013

15" MLL, 5 fish creel – 2004

Sauger: 15" MLL, 15 fish creel – 1998

White Bass: 30 fish creel limit - 1989

15" MLL, 10 fish creel - 2001

Creel limit reduced to 15 - 2005

Habitat Enhancement and Monitoring

2016 - None.

Angling Pressure

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------|------|------|------|------|------|------|------|------|------|------|
| | 19 | 11 | 20.1 | NA | NA | NA | 14.7 | 18 | 14.7 | 13.5 |
| Black Bass (LMB,SPB) | 9.23 | 5.4 | 7.8 | NA | NA | NA | 7.5 | 13 | 11.7 | 10.5 |
| Smallmouth | 0.1 | 0 | 0 | NA | NA | NA | NA | 0.04 | -- | -- |
| Tournaments ^{BITE} | 32 | 0 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lbs/Angler Day ^{BITE} | 4.6 | 0 | 7.97 | -- | -- | -- | -- | -- | -- | -- |
| Fish/Angler Day ^{BITE} | 2.2 | 0 | 3.43 | -- | -- | -- | -- | -- | -- | -- |
| Angler Hours ^{CREEL} | | | | | | | | | | |
| Catch Rate ^{CREEL} | | | | | | | | | | |

Total Value of Fishery (thousands)

| | | | | | | | | | | |
|----------------------|-------|-------|-------|----|----|----|-------|-------|-------|-------|
| Black Bass (LMB,SPB) | 312.8 | 292.5 | 368.3 | NA | NA | NA | 1,176 | 769.7 | 796.2 | 736.8 |
| Smallmouth | 0.3 | 0.0 | 0 | NA | NA | NA | NA | 2 | -- | -- |

Largemouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------|------|-------|-------|-------|--------------|-------|-------|-------|------|--------------|
| Spring Electro Hours | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Fall Electro Hours | 2.88 | 2.05 | 1.51 | 0.73 | 1.17 | 0.88 | 1.69 | 2.53 | 2.62 | 2.27 |
| Recruitment | | | | | | | | | | |
| Age-1 CPUE | 19.7 | -- | -- | 55.3 | 17.7 | -- | -- | -- | -- | 65.9 |
| Substock CPUE | 24.7 | 26.7 | 42.7 | 38 | 11.3 | 16.7 | 19.3 | 27.3 | 11.3 | 8.7 |
| Spring Density (n) | 109 | 166 | 214 | 228 | 167 | 113 | 173 | 171 | 141 | 85 |
| PSD | 78 | 72 | 64 | 66 | 85 | 81 | 74 | 74 | 78 | 83 |
| RSD Preferred | 21 | 24 | 19 | 25 | 31 | 30 | 27 | 28 | 27 | 35 |
| CPUE | 72.7 | 111.3 | 142.7 | 152 | 111.3 | 75.3 | 115.3 | 114 | 94 | 56.7 |
| CPUE ≥ Stock | 48 | 84.7 | 100 | 131.8 | 100 | 58.7 | 96 | 86.7 | 82.7 | 48 |
| CPUE ≥ MSL (15") | 10 | 20.0 | 19.3 | 34.8 | 31.3 | 18 | 26 | 40 | 22 | 16.7 |
| Fall Density (n) | 114 | 163 | 168 | 129 | 131 | 122 | 178 | 303 | 95 | 130 |
| Fall Total CPUE | 39.6 | 79.3 | 131.5 | 163.4 | 114.1 | 121.8 | 157.2 | 112.9 | 40.9 | 48.6 |
| Fall CPUE Substock | 20 | 47.7 | 39 | 38.7 | 25.5 | 5.3 | 33.7 | 12.2 | 11.3 | 10 |
| Fall CPUE>Stock | 19.6 | 31.6 | 92.5 | 124.7 | 88.6 | 116.5 | 123.6 | 100.7 | 29.5 | 48.7 |
| Growth | | | | | | | | | | |
| Mean TL at Age-1 (mm) | 143 | -- | -- | 184 | 195 | -- | -- | -- | -- | 194 |
| Mean TL at Age-3 (mm) | -- | -- | -- | -- | 328 | -- | -- | -- | -- | 351 |
| Relative Weight | | | | | | | | | | |
| | 95 | 99 | 98 | 95 | 100 | 117 | 97 | 106 | 85 | 99 |
| Stock | | | | | | | | | | |
| Quality | 92 | 92 | 99 | 91 | 95 | 103 | 91 | 94 | 86 | 103 |
| Preferred | 90 | 102 | 98 | 87 | 93 | 94 | 89 | 81 | 85 | 96 |
| Memorable | -- | -- | -- | -- | 97 | 24 | 94 | 94 | 84 | 88 |
| Trophy | | | | | -- | | -- | -- | -- | -- |
| Mortality | | | | | | | | | | |
| Total Mortality | -- | -- | -- | -- | 43% r2=77 | -- | -- | -- | -- | 23% r2=78 |
| Fishing Success | | | | | | | | | | |
| Catch Rate | 1.08 | 0.78 | 0.98 | NA | NA | NA | 1.71 | 1.2 | 0.97 | 0.84 |
| Harvest Rate | 0.14 | 0.1 | 0.08 | NA | NA | NA | 0.07 | 0.1 | 0.08 | 0.06 |
| % Released | 92 | 92 | 98 | NA | NA | NA | 94 | 89 | 89.7 | 93.2 |
| Mean Weight | 2.74 | 2.92 | 2.04 | NA | NA | NA | 2.37 | 2.48 | 2.71 | 2.99 |

FISHERY FORECAST

The forecast for largemouth bass fishing on Pickwick Reservoir was good with moderate to good year classes produced in seventeen of the last eighteen years. Recruitment to stock sizes has been good in the last nine years and recruitment to larger sizes has improved with RSD15 values improving after declining below acceptable levels in 2005. Recruitment to the fall appeared moderate and adult size fish recruited well. The CPUE of largemouth bass in the Spring declined moderately and the catch rate of substock fish declined below the 10 year average for the sixth straight year. The CPUE of age 0 largemouth bass in the fall declined slightly and Wr values rose to acceptable levels.

Historical data has shown catch and harvest rates were comparable to other west Tennessee reservoirs. In 2016, largemouth bass comprised 51% of the fish caught by anglers (61% in 2015; 53% in 2014; 45% in 2013; 38% in 2009; 37% in 2008; 40% in 2007; 30% in 2006; 63% in 2005; 51% in 2004; 28% in 2003) and fishing pressure was comparable to historic data. Catch rates were comparable to historical rates.

In 2009, Bass tournament information (BITE) revealed Pickwick Reservoir ranked first in the state in the number of tournaments reported (50). However, no tournaments were reported as being held on Pickwick Reservoir (Tennessee) in 2010 - 2016.

Anglers spent \$7.25 per hour fishing for black bass and were willing to expend an additional 36% to participate in black bass fishing at Pickwick Reservoir. The total value of the largemouth bass fishery was \$736,820.

MANAGEMENT RECOMMENDATIONS

Continue with the 15-inch minimum size limit for largemouth bass (implemented in 2004).

Smallmouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Spring Electro Hours | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Fall Electro Hours | 2.88 | 2.05 | 1.51 | 0.73 | 1.17 | 0.88 | 1.69 | 2.53 | 2.62 | 2.27 |
| Recruitment | | | | | | | | | | |
| Age-1 CPUE | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Substock CPUE | 5.3 | 2.4 | 2.7 | 2.7 | 6 | 10 | 4 | 8 | 1.34 | 2.7 |
| Spring Density (n) | 23 | 24 | 14 | 26 | 44 | 37 | 18 | 57 | 17 | 29 |
| PSD | 33 | 47 | 60 | 86 | 69 | 55 | 67 | 69 | 75 | 76 |
| RSD Preferred | 13 | 24 | 40 | 64 | 26 | 18 | 42 | 18 | 50 | 64 |
| CPUE | 15.3 | 16 | 9.3 | 8.7 | 29.3 | 24.7 | 12 | 38 | 11.3 | 19.3 |
| CPUE \geq Stock | 10 | 12.7 | 6.7 | 14.7 | 23.3 | 14.7 | 8 | 30 | 8 | 16.7 |
| CPUE \geq Preferred | 1.3 | 3.2 | 2.7 | 9.3 | 6 | 2.7 | 3.3 | 5.3 | 4 | 10.7 |
| CPUE \geq MSL (15" 2001-2007, 2013; 2008-2012 18";) | 1.3 | 0.0 | 1.3 | 0.7 | 2 | 0 | 3.3 | 5.3 | 4 | 10.7 |
| Fall Density (n) | 29 | 20 | 3 | 10 | 13 | 8 | 13 | 16 | 28 | 38 |
| Fall Total CPUE | 11.3 | 6 | 1.9 | 14.6 | 10.7 | 7.9 | 6.7 | 6.6 | 9.8 | 12 |
| Fall CPUE Substock | 1.2 | 2 | 1.5 | 5.8 | 4.7 | 4.9 | 2.4 | 0.9 | 1.3 | 4.5 |
| Fall CPUE \geq Stock | 10.1 | 4 | 0.4 | 8.8 | 6 | 3 | 4.3 | 5.7 | 8.5 | 7.5 |
| Fall CPUE \geq Preferred | -- | 0.7 | 0.4 | 0 | 0 | 0 | 1 | 2.7 | 2.1 | 0.4 |
| Growth | | | | | | | | | | |
| Mean TL at Age-1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Mean TL at Age-3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | | | | | | | | | | |
| Relative Weight | | | | | | | | | | |
| Stock | -- | -- | -- | -- | 89 | 96 | 95 | 83 | 83 | 90 |
| Quality | 89 | 88 | -- | 100 | 88 | -- | 79 | 81 | 86 | 91 |
| Preferred | 85 | 84 | -- | 79 | -- | -- | 79 | 78 | 73 | 89 |
| Memorable | 70 | -- | -- | -- | -- | -- | -- | 78 | 87 | 82 |
| Trophy | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Fishing Success | | | | | | | | | | |
| Hours/Acre | 0.1 | -- | -- | NA | NA | NA | NA | 0.04 | -- | -- |
| Catch Rate | 0.63 | -- | -- | NA | NA | NA | 0.21 | 0.25 | -- | -- |
| Harvest Rate | 0 | -- | -- | NA | NA | NA | 0 | 0 | -- | -- |
| % Released | 99 | -- | -- | NA | NA | NA | 99 | 90 | 93.3 | 93.4 |
| Mean Weight | 6.9 | -- | -- | NA | NA | NA | 1.03 | 2.97 | 2.3 | 1.9 |

FISHERY FORECAST

Smallmouth bass have historically produced good year classes. The success of smallmouth bass recruiting to larger sizes was unknown due to the difficulty in obtaining adequate samples. However, anglers reported catches of memorable size fish. In 2007 and 2008, recruitment appeared to decline and was below the 10 year average. Spring catch rates have exceeded historic levels in three of the last five years. Recruitment to the Fall appeared satisfactory but Fall night electrofishing was discontinued due to low numbers collected. Length distributions also remained unchanged.

No anglers were interviewed seeking smallmouth bass in 2008, 2009, or 2013. In 2013, relative catch and harvest rates were poor.

MANAGEMENT RECOMMENDATIONS:

In 2012, Alabama approved a 15-inch minimum size limit for smallmouth bass (implemented in 2013) and will conduct sampling to determine the status of their largemouth bass population in 2013. Mississippi implemented a 15-inch minimum size limit for both largemouth bass and smallmouth bass in 2013.

Based on the decisions made by Mississippi and Alabama, recommendations were made to leave the largemouth bass size limit at 15-inches. The smallmouth bass size limit was lowered from 18-inches to 15-inches in March 2013 to establish similar regulations between the three states.

Spotted Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------|------|------|------|------|------|------|------|------|------|------|
| Spring electro Hours | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Fall Electro Hours | 2.88 | 2.05 | 1.51 | 0.73 | 1.17 | 0.88 | 1.69 | 2.53 | 2.6 | 2.27 |
| Recruitment | | | | | | | | | | |
| Age-1 CPUE | | | | | | | -- | -- | -- | -- |
| Substock CPUE | 0 | 0 | 0.7 | 3.3 | 0.7 | 0.7 | -- | 0 | 0 | 0 |
| Spring Density (n) | 15 | 17 | 12 | 15 | 6 | 9 | 1 | 7 | 3 | 6 |
| PSD | 93 | 71 | 91 | 67 | 100 | 88 | -- | -- | 100 | 100 |
| RSD Preferred | 13 | 0 | 18 | 13 | 40 | 25 | -- | -- | 100 | 17 |
| CPUE | 10 | 11.3 | 8 | 14.5 | 4 | 6 | -- | 4.7 | 2 | 1 |
| CPUE ≥ Stock | 10 | 11.3 | 7.3 | 14.5 | 3.3 | 5.3 | -- | 4.7 | 2 | 4 |
| Fall Density (n) | 2 | 0 | 0 | 4 | 2 | 1 | -- | 1 | 0 | 3 |
| Fall Total CPUE | 0.4 | 1.2 | -- | 5.1 | -- | -- | -- | 0.3 | 0 | 1.6 |
| Fall CPUE Substock | 0.2 | 0 | -- | 3.3 | -- | -- | -- | 0 | 0 | 1.2 |
| Fall CPUE ≥ Stock | 0.2 | 1.2 | -- | 1.8 | -- | -- | -- | 0.3 | 0 | 0.4 |
| Fall CPUE ≥ Preferred | 0.2 | 0 | -- | 0 | -- | -- | -- | 0.3 | 0 | 0.4 |
| | | | | | | | | | | |
| Stock | 95 | -- | -- | -- | -- | -- | -- | -- | -- | 81 |
| Quality | 89 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Preferred | 94 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Memorable | -- | -- | -- | -- | -- | -- | -- | -- | -- | 81 |
| Trophy | -- | - | -- | -- | -- | -- | -- | -- | -- | -- |

White Crappie and Black Crappie

| Angling Pressure (Angler Hours per Acre) | | | | | | | | | | |
|------------------------------------------|------|------|------|----|----|----|------|------|------|------|
| All Crappie | 2 | 0.2 | 1.3 | NA | NA | NA | 0.7 | 1.7 | 0.6 | 1 |
| Fishing Success | | | | | | | | | | |
| Crappie Catch Rate | 0.93 | 1.78 | 0.88 | NA | NA | NA | 1.54 | 0.48 | 0.75 | 0.44 |
| Crappie Harvest Rate | 0.8 | 1.53 | 0.67 | NA | NA | NA | 1 | 0.44 | 0.68 | 0.31 |
| WC % Released | 8 | 26 | 55 | NA | NA | NA | 52 | 14 | 13 | 65 |
| WC Mean Weight | 0.64 | 0.66 | 0.64 | NA | NA | NA | 1.03 | 1.1 | 1.1 | 1.46 |
| Total Value of Fishery (Thousands) | | | | | | | | | | |
| All Crappie | 12.5 | 12.1 | 1.05 | NA | NA | NA | 67.4 | 69.4 | 30 | 49.2 |

FISHERY FORECAST

Crappie were not collected at sufficient densities to evaluate the crappie fishery. Creel survey data collected in 2015 showed only 3% of the effort was for crappie and only 70 crappie were recorded during the creel survey. Apparently the crappie fishery in Tennessee was limited. Anglers seeking crappie spent \$4.93 per hour seeking crappie and were willing to spend an additional 40% to fish for crappie on Pickwick Reservoir. However, these data represented only 32 interviews.

MANAGEMENT RECOMMENDATIONS:

Continue with the 9-inch minimum size limit and 30 fish creel limit.

Redear Sunfish

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------------------------------------|------|------|------|------|---------|-------|------|------|------|------|
| Recruitment | | | | | | | | | | |
| Age-1 CPUE | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Substock CPUE | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Total CPUE | | | No | trap | netting | after | 2002 | -- | -- | -- |
| Net Nights | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| n | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Spring Density (Electro Survey) | | | | | | | | | | |
| PSD | 78 | 92 | 61 | 69 | 85 | 50 | 100 | 75 | 50 | 67 |
| RSD Preferred | 39 | 76 | 31 | 35 | 21 | 8 | 88 | 44 | 50 | 58 |
| CPUE | 12 | 30.4 | 58 | 17.3 | 22.7 | 8 | 17.3 | 10.7 | 6 | 8 |
| Substock CPUE | 0 | 0.8 | 18.7 | 0 | 0 | 0 | 0 | 0 | 0.67 | 0 |
| CPUE ≥ Stock | 12 | 29.6 | 39.3 | 17.3 | 22.7 | 8 | 17.3 | 10.7 | 5.3 | 8 |
| CPUE ≥ Preferred | 4.7 | 21.3 | 12 | 6 | 4.7 | 4 | 15.3 | 4.7 | 2.67 | 4.7 |
| n | 18 | 38 | 87 | 26 | 34 | 12 | 26 | 16 | 6 | 12 |
| Spring Hours | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Angling Pressure (Angler Hours per Acre) | | | | | | | | | | |
| Sunfish | 0.15 | 0.6 | | NA | -NA | NA | 0.7 | 0.7 | 0.3 | 0.2 |
| Fishing Success | | | | | | | | | | |
| Relative Catch Rate | -- | -- | -- | NA | NA | NA | 0.02 | 0.31 | 0.1 | 0 |
| Relative Harvest | -- | -- | -- | NA | NA | NA | 0.01 | 0.28 | 0.1 | 0 |
| Redear Mean Weight | 0.65 | -- | -- | NA | NA | NA | 0.38 | 0.6 | 0.42 | -- |
| Redear %Released | 0 | -- | -- | NA | NA | NA | 56 | 6 | 18 | -- |
| Total Value of Fishery (Thousands) | | | | | | | | | | |
| Sunfish | 1.7 | 2.3 | 2.6 | NA | NA | NA | 13.2 | 27.4 | 13.9 | 7.8 |

FISHERY FORECAST

Although densities were low, the redear sunfish collected were of quality size. However, water temperatures during Spring collections reduced sampling efficiency.

MANAGEMENT RECOMMENDATIONS

A 20 fish creel limit was implemented for redear sunfish in 2008.

Bluegill

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------------------------------------|------|-------|-------|------|-------|-------|---------|-------|--------|-------|
| Substock CPUE | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Total CPUE | -- | -- | -- | -- | No | trap | netting | after | 2002 | -- |
| Net Nights | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| n | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Spring Density (Electrofishing Survey) | | | | | | | | | | |
| PSD | 51 | 47 | 42 | 20 | 50 | 51 | 58 | 53 | 79 | 40 |
| RSD Preferred | 1 | 5 | 5 | 1 | 3 | 6 | 1 | 1 | 10 | 4 |
| CPUE | 97.3 | 150.0 | 157.3 | 85.3 | 174.7 | 168 | 148.7 | 58.7 | 127.3 | 178 |
| Substock CPUE | 8 | 33.3 | 14 | 28.7 | 23.3 | 13.3 | 2 | 0.7 | 2.67 | 6.7 |
| CPUE ≥ Stock | 89.3 | 116.7 | 143.3 | 56.7 | 151.3 | 154.7 | 146.7 | 58 | 124.67 | 171.3 |
| CPUE ≥ Preferred | 0.7 | 6 | 7.3 | 0.7 | 4.7 | 9.3 | 2 | 0.7 | 12.67 | 11.3 |
| n | 146 | 161 | 236 | 128 | 262 | 252 | 223 | 88 | 191 | 267 |
| Spring Hours | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Angling Pressure (Angler Hours per Acre) | | | | | | | | | | |
| Sunfish | 0.25 | 0.6 | 0.8 | NA | NA | NA | 0.7 | 0.7 | 0.3 | 0.2 |
| Fishing Success (Bluegill only) | | | | | | | | | | |
| Relative Catch Rate | 1.81 | 3.08 | 6.42 | NA | NA | NA | 4.75 | 4.15 | 2.67 | 7.79 |
| Relative Harvest | 0 | 0.0 | 1.02 | NA | NA | NA | 3.04 | 1.81 | 0.98 | 5.38 |
| Bluegill Mean Weight | 0.25 | -- | 0.25 | NA | NA | NA | 0.35 | 0.33 | 0.34 | 0.33 |
| Bluegill % Released | 70 | 84 | 90 | NA | NA | NA | 42 | 51 | 72 | 52.6 |
| Total Value of Fishery (Thousands) | | | | | | | | | | |
| Sunfish | 1.7 | 2.3 | 2.6 | NA | NA | NA | 13.2 | 27.4 | 13.9 | 7.8 |

FISHERY FORECAST

The bluegill population was typical of populations seen in other west Tennessee reservoirs. Bluegill were abundant, but few preferred size individuals were collected during sampling. However, water temperatures during Spring collections reduced sampling efficiency.

MANAGEMENT RECOMMENDATIONS

No recommendations are necessary.

Gizzard Shad

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------|-------|-------|-------|------|-------|-------|-------|------|------|------|
| Recruitment | | | | | | | | | | |
| CPUE < 150 mm | 4.8 | 35.2 | 31.8 | 21.1 | 23.9 | 81.8 | 21.9 | 60 | 53.2 | 48.6 |
| CPUE ≥ 280 mm | 52.7 | 34.3 | 23.8 | 25.1 | 44.4 | 15.8 | 26.2 | 6.3 | 29.3 | 14.3 |
| Fall Density | | | | | | | | | | |
| Fall total CPUE | 112.9 | 122.4 | 110.7 | 67.2 | 183.7 | 192.7 | 117.8 | 127 | 60.9 | 50.7 |
| Fall CPUE Substock (<180 mm) | 4.8 | 35.2 | 44.2 | 21.1 | 23.5 | 135.9 | 20.8 | 63.8 | 7.7 | 2.1 |
| Fall CPUE ≥ Stock (≥181 mm) | 108.1 | 87.2 | 66.5 | 46.1 | 160.3 | 56.8 | 97 | 63.2 | 53.2 | 34.3 |
| Fall total collected | 291 | 208 | 201 | 60 | 217 | 116 | 212 | 304 | 161 | 157 |
| Fall Electro Hours | 2.88 | 2.05 | 1.51 | 0.73 | 1.17 | 0.88 | 1.69 | 2.53 | 2.6 | 2.27 |

Threadfin Shad

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------|------|-------|-------|------|-------|-------|-------|------|------|------|
| Fall Density | | | | | | | | | | |
| Fall percent ≤ 75 mm | 27 | 100 | 89 | 64 | 98 | 99 | 100 | 100 | 79 | 79 |
| Fall Total CPUE | 76.6 | 149.4 | 145.3 | 15.5 | 187.8 | 502.6 | 205.3 | 63.6 | 39.9 | 97.2 |
| Fall Total collected | 234 | 309 | 250 | 14 | 214 | 439 | 287 | 161 | 118 | 230 |
| Fall Electro Hours | 2.88 | 2.05 | 1.51 | 0.73 | 1.17 | 0.88 | 1.69 | 2.53 | 2.6 | 2.27 |

FISHERY FORECAST

The majority of the gizzard shad collected were less than 150 mm and CPUE was at a sustainable level. As seen in other reservoirs the threadfin shad recovered over declines in 2010 and CPUE increased over historic levels. Thousands of threadfin shad were seen but not collected. Preferred sizes were abundant for predators.

Since Asian carp have been reported by commercial fishers on Pickwick Reservoir, Wr's were calculated for gizzard shad (≥ stock = 84; Stock-quality= 86) and trend data will be monitored.

MANAGEMENT RECOMMENDATIONS:

No recommendations are necessary.

Other Species Collected

| <u>Species</u> | <u>Gear</u> | <u>Number Collected</u> | <u>Value</u> |
|----------------|----------------|-------------------------|--------------|
| Black Crappie | Spring Electro | 0 | 0.0 |
| | Fall Electro | 5 | 2.2 |
| Spotted Bass | Spring electro | 6 | 4.0 |
| | Fall Electro | 3 | 1.3 |
| Sauger | Fall Electro | 0.0 | 0.0 |
| Yellow Perch | Spring Electro | 2 | 1.3 |
| | Fall electro | 12 | 5.3 |

Value:

Electrofishing – number per hour

2016 Water Quality Monitoring

Dissolved oxygen levels fluctuated each month but remained above 4.0 ppm at 12' in June (72'depth), 12' in July, and 66' in August. Secchi disc readings averaged 74 cm (range 41 – 100) and conductivity averaged 101 umhos/cm and ranged from 56 (July) to 145 (August); pH levels fell within acceptable ranges (9.2-, 7.3-, and 7.4 in June, July, and August, respectively). Alkalinity averaged 44 mg/l during June through August. Measured levels were similar to historic records.

Water levels fluctuated between January and June, with levels maintaining summer pool from mid-April to September. Additional rainfall in December also resulted in higher than normal water levels. Discharge levels exceeded the 100,000 cfs in January, March, April, and late December.

Sampling Station

TRM 207.8

Description

Habitat Enhancement and Monitoring - 2016

Angling Pressure (Angler Hours per Acre)

54

Largemouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------------------|--------------|------|------|------|------|----------------|------|------|------|------|
| Spring Electro hours | 3.75 | 3.5 | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 |
| Fall Electro hours | 1.9 | NS | 2.52 | NS | 2.86 | NS | 3.9 | 4.31 | 2.56 | 5.27 |
| Recruitment | | | | | | | | | | |
| Age-1 CPUE | -- | 6.8 | -- | 14.9 | | 10.7 | -- | -- | -- | -- |
| Substock CPUE | 1.6 | 4 | 5.6 | 15.2 | 0 | 9.1 | 0.8 | 15.7 | 2.1 | 5.1 |
| Spring Density (n) | 92 | 85 | 61 | 121 | 86 | 131 | 45 | 144 | 109 | 80 |
| PSD | 92 | 77 | 90 | 70 | 79 | 89 | 71 | 79 | 59 | 89 |
| RSD Preferred | 57 | 54 | 58 | 38 | 42 | 44 | 95 | 51 | 36 | 38 |
| CPUE | 24.5 | 24.3 | 16.3 | 32.3 | 22.9 | 34.9 | 12 | 38.4 | 29.1 | 21.3 |
| CPUE ≥ Stock | 22.7 | 20.3 | 11.7 | 17.1 | 22.9 | 25.9 | 11.2 | 22.7 | 26.9 | 16.3 |
| CPUE ≥ MSL (15") | 13.1 | 10.9 | 6.2 | 6.4 | 8.8 | 11.5 | 8 | 11.4 | 16 | 14.4 |
| CPUE/seine haul | 2.2 | 10.6 | 5.1 | 3.1 | 2.9 | 0.8 | 5.9 | 2.9 | 9.6 | 9.1 |
| Fall Density (n) | 60 | NS | 65 | NS | 77 | NS | 145 | 217 | 104 | 87 |
| Fall Total CPUE | 34.3 | NS | 29.7 | NS | 29.3 | NS | 35.9 | 47.6 | 43.7 | 19 |
| Fall CPUE Substock | 1.4 | NS | 4.9 | NS | 3.7 | NS | 19.3 | 5.4 | 14.6 | 5.5 |
| Fall CPUE>Stock | 32.9 | NS | 24.8 | NS | 25.6 | NS | 16.6 | 42.2 | 21.2 | 9.1 |
| Growth | | | | | | | | | | |
| Mean TL at Age-1(mm) | 213 | -- | -- | 148 | -- | 170 | -- | -- | -- | -- |
| Mean TL at Age-3 (mm) | 382 | | -- | -- | -- | 363 | -- | -- | -- | -- |
| Mortality | | | | | | | | -- | -- | -- |
| Total Mortality | 26% r2=88 | | -- | -- | -- | 32% r2=0.77 | -- | -- | -- | -- |
| Relative Weight (Fall) | | | | | | | | | | |
| Stock | NS | 107 | NS | 107 | NS | 114 | 111 | 111 | 111 | 101 |
| Quality | NS | 112 | NS | 100 | NS | 104 | 103 | 101 | 101 | 103 |
| Preferred | NS | 103 | NS | 102 | NS | 107 | 118 | 98 | 98 | 101 |
| Memorable | NS | 96 | NS | -- | NS | 80 | 98 | 88 | 88 | 102 |
| Trophy | NS | -- | NS | -- | NS | -- | | -- | -- | 66 |
| Fishing Success | | | | | | | | | | |
| Catch Rate | 0.61 | 0.73 | 0.48 | 0.69 | 0.58 | 0.45 | 0.42 | 0.53 | 0.51 | 0.54 |
| Harvest Rate | 0.03 | 0.02 | 0.05 | 0.01 | 0 | 0.01 | 0.01 | 0 | 0.01 | 0.03 |
| % Released | 95 | 98 | 92 | 99 | 99 | 97 | 98 | 100 | 97 | 95 |
| Mean Weight | 3.18 | 3.29 | 2.89 | 5.35 | 2.98 | 2.53 | 3.87 | -- | 3.53 | 2.64 |

NS – NO SAMPLE

FISHERY FORECAST:

The largemouth bass fishery is gaining popularity due to the amount of tournaments being held at Reelfoot Lake. Although these tournaments were not reported through the Agency, concerned anglers reported tournament results to the Agency and these reports exceed what has historically been reported through the BITE program. CPUE during Spring electrofishing surveys has been < 30 fish/hour in ten of the last fifteen years and this was attributed to poor recruitment in eight of the last fifteen years (good recruitment: ≥ 5.0 YOY LMB/hour). However, sampling conditions in 2008 – 2011 may partially explain reduced catch rates during that period (low water levels associated with drought conditions and construction of a new spillway). In 2013, Spring weather patterns impacted sampling (cooler than normal air temperatures). However, recruitment was excellent in 2014 and electrofishing catch rates exceeded the 10-year average. Although catch rates have generally declined, PSD and RSD15 remained above acceptable levels with a significant increase PSD for 2016. As with other reservoirs in west Tennessee,

recruitment of largemouth bass fluctuated in the 1990's, although densities of fish ≥ 15 -inches remained comparable to historic levels. However, the low recruitment of largemouth bass may not be as critical on Reelfoot Lake since fishing pressure continues to remain low and over 90% of the fish caught were released.

The length frequency showed good distribution of quality size and larger size classes but few Age 1 fish collected. Relative stock indices continued to exceed the acceptable range which was indicative of a population with a high percentage of preferred and larger size fish. RSD15 has exceeded the acceptable RSD range since 2005 which was indicative of a population with low stock size fish and high numbers of preferred fish. Spring water temperatures (cooler than preferred) contributed to poor samples in 2005, 2006, 2013, 2015, and catch rates were indicative of a population with poor recruitment. Although the Spring CPUE of YOY improved in 2010 (highest since 1997), no substock bass were collected in Spring 2011. One note, 2008, 2010, and 2011 water levels were the lowest seen during the summer and fall due to severe drought conditions and construction of a new dam and spillway. This factor may have negatively impacted YOY survival and recruitment to larger sizes.

Spring CPUE was fair. Spring CPUE of preferred sizes exceeded the 10-year average during four of the last five years, but CPUE of stock size fish decreased. Due to the low sample size and unfavorable conditions, a crappie targeting survey was also conducted but largemouth bass were also collected. LMB collected during those samples showed increased recruitment (3.5/hour < 205 mm) and comparable total catch rates (20.4/hour) and preferred size catch rates (8.2/hour). Fall catch rates of age 0 LMB increased slightly and stock size fish declined slightly.

Electrofishing catch rates were comparable in all four basins (Lower – 26.0; Middle – 21.0; Buck – 18.7; Upper – 26.0/hour). Historically, Buck Basin has appeared to have the highest quality bass population when compared to the three other basins, but has been the lowest catch rate the last three years.

Although angler catch rates have declined, angler catch rates have remained acceptable; angler pressure has declined below the ten year average the last nine years. Since 1997, anglers have harvested less than 10% of the fish caught (prior to 1997, anglers harvested more than 20% of the fish caught).

Anglers spent \$2.64 per hour fishing for largemouth bass and were willing to spend an additional 26% seeking largemouth bass on Reelfoot Lake. The estimated total value of the largemouth bass fishery at Reelfoot Lake was \$105,250.

MANAGEMENT RECOMMENDATIONS:

Continue with the 15-inch minimum size limit with a five fish per day creel limit.

White Crappie

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------------------------------------------|-------|-------|--------------|------|--------------|-------|----------|-------|-------|-------|
| Recruitment (Trap Net Survey) | | | | | | | | | | |
| Age-0 CPUE | -- | -- | 3.6 | | 1.9 | NS | -- | -- | -- | -- |
| Substock CPUE | 6.7 | NS | 3.8 | NS | 1.5 | NS | 32.6 | 21.1 | 4.6 | 10.9 |
| Total CPUE | 11 | NS | 7 | NS | 3.6 | NS | 32.7 | 24 | 10 | 10.7 |
| Net Nights | 39 | NS | 40 | NS | 30* | NS | 40 | 40 | 40 | 40 |
| n | 427 | NS | 289 | NS | 108 | NS | 1,308 | 961 | 329 | 469 |
| Spring Density (Electrofishing Survey) | | | | | | | | | | |
| PSD | 72 | 95 | 82 | 93 | 95 | 89 | 99 | 100 | 74T | 71T |
| RSD P | 34 | 75 | 26 | 76 | 54 | 71 | 84 | 98 | 59T | 54T |
| CPUE | 22.9 | 23.1 | 35.5 | 14.4 | 33.1 | 15.2 | 36.5 | 28 | 6.5T | 51.0T |
| CPUE ≥ Stock | 22.5 | 17.4 | 27.5 | 14.4 | 33.1 | 14.9 | 36.5 | 26.4 | 6.1T | 48.2T |
| CPUE ≥ P | 12.3 | 17.4 | 17.7 | 10.9 | 17.3 | 10.7 | 30.7 | 25.9 | 3.8T | 22.6T |
| n | 427 | 81 | 61 | 54 | 124 | 57 | 137 | 105 | 35 | 296T |
| Spring Hrs | -- | 3.5 | 2.0(T) | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 | 6.13T | 7.2T |
| T=Targeted | | | | | | | | | | |
| Growth | | | | | | | | | | |
| Mean TL at Age-0 Fall | -- | -- | 85 | -- | 77 | -- | -- | -- | -- | -- |
| Mean TL at Age-2 Fall | -- | -- | 226 | -- | 236 | -- | -- | -- | -- | -- |
| Mortality | | | | | | | | | | |
| Total Mortality | -- | -- | 85% r2=69 | -- | 43% r2=72 | -- | -- | -- | -- | -- |
| Relative Weight (Fall) | | | | | | | | | | |
| Stock | 101 | NS | 111 | NS | 84 | NS | -- | 99 | 109 | 108 |
| Quality | 103 | NS | 109 | NS | 91 | NS | -- | 96 | 98 | 85 |
| Preferred | 117 | NS | 115 | NS | 111 | NS | -- | -- | 117 | 106 |
| Memorable | 113 | NS | 107 | NS | 101 | NS | -- | -- | 105 | 112 |
| Trophy | | NS | -- | NS | | NS | -- | -- | -- | 111 |
| Angling Pressure (Angler Hours per Acre) | | | | | | | | | | |
| All Crappie | 26.8 | 32.6 | 25.9 | 20.6 | 20.5 | 17.8 | 23.2 | 12.8 | 11.6 | 12.8 |
| Fishing Success | | | | | | | | | | |
| Crappie Catch Rate | 2.08 | 1.91 | 1.49 | 1.79 | 1.63 | 1.08 | 1.13 | 0.57 | 0.87 | 0.93 |
| Crappie Harvest | 1.37 | 1.36 | 1.05 | 1.01 | 1.15 | 0.71 | 0.88 | 0.52 | 0.45 | 0.61 |
| WC % Released | 36 | 30 | 32 | 46 | 33 | 37 | 24 | 11 | 63 | 36 |
| WC Mean Weight | 0.68 | 0.68 | 0.7 | 0.7 | 0.68 | 0.78 | 0.72 | 0.94 | 1 | 0.78 |
| Value of Fishery (Trip Expenditures in Thousands) | | | | | | | | | | |
| All Crappie | 1,118 | 1,688 | 1,544 | 996 | 1,122.80 | 983.3 | 1,375.30 | 770.2 | 818.8 | 779 |

NS – NO SAMPLE

Black Crappie

| | 2007 | 2008 | 2009 | 2010 | 2011* | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------|------|------|--------------|------|--------------|------|------|------|-------|-------|
| Recruitment (Trap Net Survey - Fall) | | | | | | | | | | |
| Age-0 CPUE | -- | -- | 1 | NS | 3.8 | NS | -- | -- | -- | -- |
| Substock CPUE | 1.2 | -- | 1.5 | NS | 2.8 | NS | 6.9 | 3.2 | 0.7 | 0.3 |
| Total CPUE | 5.4 | -- | 2.7 | NS | 5.2 | NS | 8.6 | 5.2 | 2.2 | 0.9 |
| Net Nights | 39 | -- | 40 | NS | 30* | NS | 40 | 40 | 40 | 40 |
| n | 213 | -- | 109 | NS | 157 | NS | 342 | 209 | 88 | 38 |
| Density (Spring Electrofishing Survey) | | | | | | | | | | |
| PSD | 72 | 94 | 11 | 28 | 70 | 84 | 76 | 100 | 54T | 64T |
| RSD Preferred | 33 | 61 | 6 | 11 | 21 | 33 | 57 | 80 | 48T | 22T |
| CPUE | 6.1 | 5.1 | 82.2 | 15.7 | 9.9 | 14.9 | 5.9 | 2.9 | 10.5T | 24.0T |
| CPUE ≥ Stock | 4 | 5.1 | 56.7 | 14.1 | 9.9 | 13.6 | 5.6 | 2.7 | 9.8T | 18.0T |
| CPUE Preferred | 2.2 | -- | 6.2 | 1.6 | 2.1 | 4.5 | 3.2 | 2.1 | 4.6T | 4.6T |
| n | 19 | 18 | 92 | 59 | 37 | 56 | 22 | 11 | 90T | 170T |
| Spring Hours | 3.75 | 3.5 | 2.0(T) | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 | 6.13T | 7.2T |
| % Black crappie | 4 | 18 | 60 | 52 | 23 | 50 | 14 | 9 | 72T | 36T |
| T=Targeted | | | | | | | | | | |
| Growth (Fall) | | | | | | | | | | |
| Mean TL at Age-0 Fall | -- | -- | 91 | -- | 82 | -- | -- | -- | -- | -- |
| Mean TL at Age-2 Fall | -- | -- | 167 | -- | 218 | -- | -- | -- | -- | -- |
| Mortality | | | | | | | | | | |
| Total Mortality | -- | -- | 85% r2=87 | -- | 42% r2=65 | | -- | -- | -- | -- |
| Relative Weight (Fall) | | | | | | | | | | |
| Stock | 97 | NS | 96 | NS | 123 | NS | 106 | 110 | 111 | 110 |
| Quality | 107 | NS | 113 | NS | 104 | NS | 118 | 112 | 111 | 113 |
| Preferred | 107 | NS | 114 | NS | 106 | NS | 100 | 101 | 102 | 112 |
| Memorable | 105 | NS | 99 | NS | 97 | NS | 100 | 98 | 101 | 104 |

NOTE: In 2009, mean total length at age 2 estimated from early Spring electrofishing. NS – NO SAMPLE

* 2011 - Only Lower Blue Basin and Upper Blue Basin were sampled with trap nets due to very low water levels in the Fall.

FISHERY FORECAST:

Spring electrofishing catch rates of white crappie increased to above the 10-year average (Standard – 12.3/hr; targeted – 51/hr). However, spring electrofishing relative stock indices depict a population of quality individuals (over 52% ≥ 250 mm) and Wr's were within or exceeded the acceptable range. Black crappie CPUE were also low in Spring electrofishing (standard – 17.9/hr; target – 24/hr) and fall electrofishing collected 18.3 fish/hour. Nearly 45% of the black crappie collected in the fall were ≥ 250 mm.

The CPUE during trap net showed YOY catch rates were similar between basins (Lower – 0.9/NN; Middle – 4.4/NN; Buck – 21.8/NN and Upper Blue – 16.8/NN).. Although the majority of crappie fishing is in the Lower Basin, Lower Blue Basin has historically had the lowest trap net catch rates. Although black crappie abundance declined in 2013 and 2014, densities increased in 2015 and 2016, and percent abundance of black crappie during electrofishing surveys has remained around 50% during four of the last seven years. The density of black crappie will continue to be monitored. The crappie fishery has been on the decline, but increased catch rates in electrofishing and trap nets in 2016 show good recruitment and reproduction. Although trap netting surveys were not conducted during 2010-2012 (very low water levels), the crappie fishery probably experienced very low recruitment of crappie during those years since crappie do not respond well to drought conditions (drought periods in 2010, 2011). However,

recruitment rates have improved the last four years.

Fishing pressure for crappie has decreased below the 10 year average the last six years although crappie have remained the most sought species. The catch rate for crappie declined from 1979 to 2001, when fishing pressure increased. Although anglers harvest nearly one crappie per hour, harvest rates have generally declined since 2006. The total number of fish harvested per acre (25.3/acre in 2001; 46/acre in 2002; 72.7/acre in 2003; 102/acre in 2004; 87/acre in 2005; 68/acre in 2006; 55.9/acre in 2007; 50.4/acre in 2008; 42.5/acre in 2009; 22.3/acre in 2010; 22.2/acre in 2011; 12.6/acre in 2012; 20.4 in 2013; 7.1 in 2014; 4.9 in 2015; 8.9 in 2016) has decreased since 2005 and may be attributed to fishing conditions during March and April (fluctuating water levels and unstable weather patterns), gasoline prices, low recruitment levels, and the decline in fishing pressure. During 2013, water temperatures did not warm to normal Spring water temps until early May and this late warm-up negatively impacted crappie harvest; in 2014, similar Spring conditions existed and the lake froze for 3-4 weeks in March. As previously mentioned, low recruitment levels are suspected for 2010-2012 since very low water levels and drought periods existed during those years and these declines negatively impacted numbers of adult fish.

The average weight of the crappie harvested at Reelfoot Lake has increased since 1985 and remained high quality; the increased weight of crappie was attributed to the increased density of the silverside population. The CPUE of silverside collected in seine hauls increased but remained below the 10-year average. This decline is a concern since silverside is important forage for crappie. The forecast for the fishery will depend on abundance of silverside, fishing pressure, and the effects of eliminating the commercial crappie fishery (after the 2000 - 2001 season). The TWRA will closely monitor the population.

Anglers spent \$4.49/hour seeking crappie and were willing to spend an additional 23% to fish for crappie at Reelfoot Lake. The total value of the fishery by anglers was \$779,060. The high estimate for anglers seeking crappie was attributed to the fact that 30% of the anglers interviewed traveled over 250 miles to fish at Reelfoot Lake. Although the crappie fishery has declined, anglers still travel long distances.

MANAGEMENT RECOMMENDATIONS:

Continue with the 30 fish creel limit for crappie (implemented in 2002).

Bluegill

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------------------------------------------|------|------|------|-------|-------|-----------------------------|-------|-------|-------|-------|
| Recruitment (Trap Net Survey - Fall) | | | | | | | | | | |
| Age-1 CPUE | 2.4 | NS | -- | NS | -- | 7.2 (EL) | -- | -- | -- | -- |
| Substock CPUE | 1.2 | NS | 0.2 | NS | 0.1 | NS | 1 | 2.1 | 0.4 | 1.4 |
| Total CPUE | 3.7 | NS | 1.5 | NS | 0.9 | NS | 1.2 | 3.7 | 0.6 | 1.6 |
| Net Nights | 39 | NS | 40 | NS | 30* | NS | 40 | 40 | 40 | 40 |
| n | 145 | NS | 60 | NS | 28 | NS | 47 | 149 | 24 | 74 |
| Density (Spring Electrofishing Survey) | | | | | | | | | | |
| PSD | 82 | 59 | 57 | 57 | 68 | 67 | 58 | 38 | 62 | 68 |
| RSD Preferred | 36 | 34 | 12 | 16 | 15 | 21 | 17 | 7 | 5 | 23 |
| CPUE | 72 | 38.9 | 80.8 | 119.2 | 48.8 | 73.3 | 50.4 | 115.5 | 73.1 | 88 |
| Substock CPUE | 2.4 | 4 | 5.9 | 43.7 | 5.6 | 8.8 | 13.3 | 10.1 | 15.5 | 12.3 |
| CPUE ≥ Stock | 69.6 | 35 | 74.9 | 75.5 | 43.2 | 64.5 | 37.1 | 105.3 | 57.6 | 75.7 |
| CPUE ≥ Preferred | 25.1 | 12 | 9.3 | 11.7 | 6.9 | 13.3 | 6.4 | 6.9 | 2.9 | 17.1 |
| n | 270 | 136 | 303 | 447 | 183 | 275 | 189 | 433 | 274 | 330 |
| Spring Hours | 3.75 | 3.5 | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 |
| Growth | | | | | | | | | | |
| Mean TL at Age-1 | 69 | -- | -- | -- | -- | 75 | -- | -- | -- | -- |
| Mean TL at Age-3 | 175 | -- | -- | -- | -- | 188 | -- | -- | -- | -- |
| Mortality | | | | | | | | | | |
| Total Mortality | | -- | -- | -- | -- | 69% r ² =0.95 | -- | -- | -- | -- |
| Angling Pressure (Angler Hours per Acre) | | | | | | | | | | |
| Sunfish | 12 | 11.7 | 9.2 | 9.2 | 6.9 | 8.6 | 8.2 | 5.8 | 8.1 | 7.9 |
| Fishing Success | | | | | | | | | | |
| Sunfish Catch Rate | 2.33 | 2.5 | 2.21 | 2.33 | 1.79 | 1.01 | 2.22 | 2.53 | 1.98 | 1.78 |
| Sunfish Harvest Rate | 1.82 | 2.05 | 1.79 | 1.71 | 1.44 | 0.81 | 1.83 | 1.88 | 1.56 | 1.34 |
| Bgill Mean Weight | 0.43 | 0.45 | 0.42 | 0.43 | 0.44 | 0.51 | 0.51 | 0.5 | 0.41 | 0.43 |
| Bgill % Released | 26 | 21 | 22 | 31 | 24 | 23 | 17 | 29 | 28 | 28.7 |
| Value of Fishery (Trip Expenditures in Thousands) | | | | | | | | | | |
| Sunfish | 648 | 731 | 570 | 500 | 466.9 | 552.9 | 520.5 | 363.4 | 582.8 | 504.5 |

NS – NO SAMPLE

* Only Lower Blue Basin and Upper Blue Basin were sampled with trap nets due to very low water levels in the Fall.

FISHERY FORECAST:

The bluegill fishery remains one of the best in the state. Although RSDP has generally declined the last three years, RSDP increased dramatically in 2016 as did CPUE of preferred bluegill. The apparent declines in quality from 2013-2015 may have been attributed to sampling conditions (cooler water temps, drought conditions, and unusually warm water temps). Total CPUE has fluctuated since 2007. Estimated total mortality determined from length at age data appeared high (69%) in 2012. However the CPUE of stock size fish increased significantly in 2014 and remained high in 2016.

Fishing pressure has declined 34% since 2007, but catch and harvest rates increased and were comparable to the ten year average. Since historic data has shown that over 49% of the anglers travel more than 100 miles, gasoline prices may contribute to the decline in fishing pressure. Mean weight and RSD8 remained above the 10 year average.

Anglers spent \$4.86/hour seeking bluegill and were willing to spend an additional 21% to fish for bluegill at Reelfoot Lake. The total value of the fishery by anglers was \$504,480. The high value estimate for anglers seeking bluegill was attributed to the fact that 30% of the anglers interviewed traveled over 250 miles to fish.

MANAGEMENT RECOMMENDATIONS:

No recommendations are necessary.

NOTE: As requested by Mike Hayes, TWRC Commissioner, 115,130 redear sunfish were stocked into Reelfoot Lake in November, 2010 (1,588/pound). These fish were stocked in Lower Blue Basin.

Channel Catfish

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Angling Pressure (Angler Hours per Acre) | | | | | | | | | | |
| Catfish | <0.1 | 0.65 | 0.4 | 0.6 | 0.6 | 1.1 | 0.14 | 0.05 | 0.58 | 1.54 |
| Fishing Success | | | | | | | | | | |
| Catch Rate | <0.1 | 0.65 | 0.4 | 0.6 | 0.6 | 1.1 | 0.14 | 0.7 | 1.1 | 1.22 |
| Harvest Rate | 0.83 | 0.49 | 1.03 | 0.24 | 0.34 | 0.62 | 0.55 | 0.19 | 0.78 | 0.99 |
| % Released | 0.98 | 0.55 | 1.22 | 0.4 | 0.43 | 1.11 | 0.79 | 20 | 30 | 28 |
| Mean Weight | 0.83 | 0.49 | 1.03 | 0.24 | 0.34 | 0.62 | 0.55 | 2.52 | 1.93 | 2.15 |
| Value of Fishery (Trip Expenditures in Thousands) | | | | | | | | | | |
| Catfish | 2.43 | 2.69 | 2.5 | 2.48 | 35 | 2.09 | NA | -- | 28.3 | 33.8 |

Gizzard Shad

| Recruitment | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------|-------|------|------|------|------|------|-------|------|-------|------|
| CPUE < 150 mm | 253.2 | NS | 55.6 | NS | 61.5 | NS | 43.3 | 21.1 | 91.4 | 13.3 |
| CPUE ≥ 280 mm | 4.2 | NS | 1.9 | NS | 42 | NS | 0.5 | 0 | 0 | 0.7 |
| Density | | | | | | | | | | |
| Fall total CPUE | 350.2 | NS | 165 | NS | 114 | NS | 106.6 | 70 | 219 | 90.3 |
| Fall CPUE Substock | 314.2 | NS | 77.3 | NS | 81.2 | NS | 71 | 31.7 | 119.3 | 77 |
| Fall CPUE ≥ Stock | 36 | NS | 87.7 | NS | 33.8 | NS | 35.5 | 38.2 | 99.7 | 12.7 |
| Fall total collected (n) | 571 | NS | 356 | NS | 285 | NS | 317 | 310 | 547 | 393 |
| Fall Electro Hours | 1.9 | NS | 2.52 | NS | 2.5 | NS | 3.9 | 4.31 | 2.56 | 5.27 |

Threadfin Shad

| Density | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------|------|------|------|------|------|------|------|------|------|------|
| Fall CPUE < 75 mm | 33.2 | NS | 0 | NS | 35.7 | NS | 1 | 0 | 0 | 0 |
| Fall Total CPUE | 40 | NS | 0 | NS | 52.2 | NS | 1 | 0 | 0 | 0 |
| Fall Total collected (n) | 571 | NS | 0 | NS | 145 | NS | 4 | 0 | 0 | 0 |

NS – NO SAMPLE

Other Prey

| | | | | | | | | | | |
|--------------------------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|
| Silverside no/seine haul | 115 | 158 | 272.4 | 37.8 | 60.7 | 67.7 | 176.3 | 129.8 | 164.3 | 136.2 |
| Bluegill no/seine haul | 184.9 | 194.7 | 1,055 | 239.9 | 68.1 | 206.4 | 48.2 | 56.4 | 559.3 | 132 |

MANAGEMENT RECOMMENDATIONS:

Extremely low water levels have compromised fall survey data in the past. Historically gizzard shad and bluegill have provided preferred size prey for predators, with threadfin shad providing good prey densities occasionally. In general, gizzard shad recruitment appeared to decline and recruitment declined below historical levels (significant increases in 2015). Bluegill densities increased in seine surveys in 2015 and continued in 2016. Since Asian carp have been collected during surveys, Wr's were calculated for gizzard shad (2013: ≥ stock = 85; Stock-quality=85; 2014: ≥ stock = 95; Stock-quality=95; 2015 : ≥ stock = 92; Stock-quality=92; 2016 : ≥ stock = 114; Stock-quality= 114) and trend data will be monitored.

The average weight of the crappie harvested at Reelfoot Lake has increased since 1985 and remained high quality; the increased weight of crappie was attributed to the increased density of the silverside population. Although catch rates increased in 2013 seine hauls and continued in 2015 and 2016; the CPUE of silverside collected in seine hauls is not stable and can decrease dramatically, making this a major concern since silversides is important forage for crappie. Water levels during seine collections have impacted capture of this species and continue to be a limiting factor of determining silverside reproduction and recruitment success. The forecast for the white crappie fishery will depend on abundance of silverside, fishing pressure, and the effects of eliminating the commercial crappie fishery (after the 2000 - 2001 season). TWRA will closely monitor the population.

Other Species Collected – 2016

| <u>Species</u> | <u>Number Collected</u> | <u>Gear</u> | <u>Value</u> |
|-----------------------|-------------------------|------------------|--------------|
| Bluegill | 74 | Trapnetting | 1.9 |
| Bowfin | 22 | Trapnetting | 0.6 |
| Channel Catfish | 7 | Trapnetting | 0.2 |
| Common Carp | 3 | Trapnetting | <0.1 |
| Freshwater Drum | 2 | Trapnetting | <0.1 |
| Gizzard Shad | 617 | Trapnetting | 15.4 |
| Golden Shiner | 2 | Trapnetting | <0.1 |
| Grass pickerel | 1 | | <0.1 |
| Largemouth Bass | 173 | Targeted Electro | 24.0 |
| | 1 | Trapnetting | <0.1 |
| Orangespotted Sunfish | 25 | Trapnetting | 0.6 |
| Bigmouth buffalo | 1 | Trapnetting | <0.1 |
| Spotted Gar | 25 | Trapnetting | 0.6 |
| Warmouth | 17 | Trapnetting | 0.4 |
| Yellow Bass | 45 | Trapnetting | 1.1 |

2016 Water Quality Monitoring (Six sampling stations)

JUNE

Dissolved oxygen levels were above 4.0 ppm until the bottom (fell below 4.0 ppm at bottom) and secchi disc readings improved and averaged 49 cm (2015- 41.6 cm; 2014- 48.8 cm; 2013 - 48.6 cm) at the six sites which was an increase over 2009-2012 levels (14 cm; 2011 34.7 cm; 2012 – 38 cm) In general secchi disc readings were similar in all basins. Water temperatures averaged 29.8°C at 2 feet and water temperatures increased as sampling progressed upstream, as did pH.

JULY

Dissolved oxygen levels were good at all depths at all stations except Totem Pole where dissolved oxygen fell below 4.0 ppm at 3'. Water temperatures were exceeded June temperatures (30.5°C at 2'). Secchi disc average increased to 45.3 cm (2015- 36.7 cm; 2014 - 40 cm; 2013 - 42.3 cm; 2012 - 37 cm) and surface pH readings averaged 8.7 (7.8 – 2015; 10 – 2014; 8.4-2013; 9.2 in 2012) at the six sites. In general pH readings ranged from 7.45 to 9.36 at the six sites.

AUGUST

Dissolved oxygen levels were acceptable at all depths except Brewer's Bar (<4.0 ppm at 1'); Totem Pole (<4.0 ppm at 3'); Catfish Channel (<4.0 ppm at 8'); and Office Site (<4.0 ppm at 9'). Water temperatures averaged cooler than historic data and measured 28.9°C at 2' at the six stations (2015 – 26.1°C; 2014 - 30.1°C; 2013 - 28.1 C). Secchi disc readings averaged 38.8 cm (2015 – 35.2 cm; 2014 - 40 cm; 2013 - 44.7 cm; 2012 - 29 cm) and were similar between stations. The surface pH readings averaged 9.0 (2015 – 8.5; 2014 - 10.4; 2013 - 8.6; 2012 - 9.8) at the six sites.

Sampling Stations

Office Station – bottom depth – 12'

Catfish Channel – bottom depth – 14'

Joe Basin - bottom depth – 5'

Palestine - bottom depth – 3'

Brewer's Bar - bottom depth – 2'

Upper Blue Basin- bottom depth – 5'

2016 Seine Data

| Species | <1.0 | 1.0 - 1.9 | 2.0 - 2.9 | 3.0 - 3.9 | 4.0 - 4.9 | >5.0 | total # | %of total | %of sample | CPUE |
|-------------------------------------------------------------------|-----------|-------------|-------------|-----------|-----------|-----------|-------------|-----------|------------|--------|
| Inland Silversides | 0 | 475 | 751 | 0 | 0 | 0 | 1226 | 44.81% | 88 | 136.22 |
| Gambusia | 0 | 17 | 1 | 0 | 0 | 0 | 18 | 0.66% | 55 | 2.00 |
| Warmouth Sunfish | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0.00 |
| Bluegill Sunfish | 91 | 863 | 189 | 33 | 11 | 1 | 1188 | 43.42% | 100 | 132.00 |
| Blk. Spt. Topminnow | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0.04% | 11 | 0.11 |
| White Crappie | 0 | 5 | 19 | 0 | 0 | 0 | 24 | 0.29% | 22 | 2.67 |
| Spotted Sunfish | 0 | 0 | 8 | 0 | 0 | 0 | 8 | 0.29% | 11 | 0.89 |
| Pugnose Minnow | 0 | 22 | 13 | 0 | 0 | 0 | 35 | 1.28% | 44 | 3.89 |
| Largemouth Bass | 0 | 0 | 58 | 22 | 2 | 0 | 82 | 3.00% | 88 | 9.11 |
| Black Crappie | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0.00 |
| Yellow Bass | 0 | 9 | 68 | 6 | 1 | 4 | 88 | 3.22% | 77 | 9.78 |
| Golden Shiner | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0.00 |
| Channel Catfish | 0 | 0 | 9 | 3 | 2 | 0 | 14 | 0.51% | 33 | 1.56 |
| Org. Spt Sunfish | 0 | 3 | 23 | 13 | 0 | 0 | 39 | 1.43% | 55 | 4.33 |
| Spotted Gar | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0.04% | 11 | 0.11 |
| Longear Sunfish | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0.00 |
| Gizzard Shad | 0 | 0 | 0 | 1 | 1 | 7 | 9 | 0.33% | 44 | 1.00 |
| Bullhead Minnow | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0.11% | 11 | 0.33 |
| Johnny darter | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 | 0.00 |
| Totals | 91 | 1395 | 1142 | 78 | 17 | 13 | 2736 | | | |
| 9 sites sampled, starting at 9 PM until 11Pm. | | | | | | | | | | |
| The average water temperature between sites was 30.38 degrees (C) | | | | | | | | | | |
| Water levels summer pool, no rain for past 30 days | | | | | | | | | | |

REGION 2

Cheatham Reservoir

Description

Area (acres): 7,450 **Mean Depth (feet):** 18 **Shoreline (miles):** 320

Counties: Davidson. Cheatham and Sumner

Full Pool Elevation (feet-msl): 385 **Winter Pool Elevation (feet-msl):** 384

Dam Completion: 1952

Summary:

Annual fish population surveys for largemouth bass and crappie are used to evaluate and manage Cheatham Reservoir fisheries. Walleye, sauger and striped bass are stocked annually to enhance and develop the riverine fishery. Because of the close proximity of Cheatham Reservoir to metropolitan areas it has great potential to attract fishermen if quality fishing can be maintained and/or achieved.

Total largemouth bass catch-per-unit-effort (CPUE) from electrofishing in 2016 was 84 fish/hour, with 17/hour over 15 inches. Fish between 12 and 15 inches made up 30.7 % of electrofishing sample, which is a ten year low. CPUE of sub-stock largemouth bass was below the ten year average (15/hour) indicating a weak 2016 year-class. Electrofishing abundance of stock size and greater fish was high (77/hour). These fish are probably from the strong 2015 year-class. High abundance of stock size largemouth bass indicates good future recruitment of catchable size fish. Proportional stock density was in the acceptable range (62 %) and relative stock density (preferred) was 22 % indicating a good proportion of the population over 15 inches. Stock density indices indicate sufficient number and sizes of largemouth bass to maintain quality fishing through 2017 and 2018. The strong 2015 year-class should compensate for the weaker 2016 year-class. Alternating strong and weak year-classes are common. The biggest concern would be back to back weak year classes.

White crappie were the predominate crappie species caught in 2015 trap net samples from Cheatham Reservoir (93% white crappie). Trap net samples revealed a weak year-class (0.15 age-0 crappie/net night) in 2016. Overall abundance of white crappie from trap net samples was poor with 1.3 crappie caught net/night. Abundance of sub-legal (stock size) crappie was good (1.2/net night), these fish were probably from the 2015 year-class. Crappie fishing should continue to be fair to good as the moderate 2014 and 2015 year-classes grow and move through. The 2014 and 2015 year classes should recruit into the fishery in 2017-2018. Relative weights (condition factor) of crappie collected in fall trap nets was good, all size classes were 99-129% when compared to a standard fish.

Cheatham reservoir received no sauger in 2015 or 2016 due to lower than expected hatchery production. The sauger population in Cheatham Reservoir is completely dependent on stocking. The impounded riverine system has no shoal areas for sauger to spawn naturally. Cheatham Reservoir should be ideal habitat for sauger from fingerling to adult, but require annual stocking. Evaluating these stockings is necessary, but unfortunately, high spring flows have prevented annual sampling

Hatchery personnel stocked 46,624 walleye fingerlings in the 2016. This is about six per/acre. The walleye population in Cheatham Reservoir is completely dependent on stocking. To determine if stocking walleye can be successful a minimum stocking rate of ten/acre is required. Anglers have reported regular catches and limits of walleye below Old Hickory Dam in the spring and summer.

Experimental gill net sampling is planned in spring 2018 to evaluate this fishery, if water conditions permit.

In 2016, 65,927 (88/acre) striped bass fingerlings were stocked into Cheatham Reservoir. Evaluation of the striped bass fishery is difficult because creel surveys are not conducted on Cheatham Reservoir. Quantitative sampling is also difficult because of the riverine habitat, high flows and the unpredictable movement patterns of striped bass. Regular catches of striped bass are observed below Old Hickory Dam in the spring and are a very important component of this fishery. Cheatham Reservoir has great potential for a hatchery brood fish source, if stocking numbers are maintained. Striped bass from Cheatham also offer an earlier source of hatchery brood fish. Currently only one other dependable brood source is located within the region.

Largemouth Bass - Cheatham Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 10 | 12 | 12 | 4 | 18 | 6 | 12 | 5 | 15 | 7 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | 71 | 68 | 60 | 60 | 65 | 59 | 75 | 62 | 76 | 62 |
| RSD (preferred) | 25 | 23 | 20 | 27 | 19 | 23 | 28 | 31 | 27 | 22 |
| CPUE (total) | 100 | 132 | 133 | 116 | 145 | 96 | 106 | 91 | 97 | 84 |
| CPUE \geq Stock | 91 | 120 | 121 | 111 | 127 | 90 | 94 | 86 | 82 | 77 |
| CPUE \geq 15" | 23 | 28 | 24 | 30 | 24 | 21 | 26 | 26 | 22 | 17 |
| CPUE \geq 20" | 2 | 4 | 4 | 2 | 2 | 2 | 1 | 3 | 4 | 1 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | 200 | - | - | - |
| Length Age-3 | - | - | - | - | - | - | 336 | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 91 | 99 | 93 | 90 | 94 | 88 | 92 | 91 | 96 | 90 |
| Quality | 92 | 100 | 98 | 92 | 99 | 94 | 99 | 86 | 105 | 87 |
| Preferred | 94 | 98 | 99 | 97 | 98 | 97 | 103 | 92 | 92 | 88 |
| Memorable | 105 | 102 | 103 | 102 | 103 | 93 | 97 | 97 | 95 | 96 |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | 0.34 | - | - | - |

Spotted Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 1 | 1 | 1 | 1 | 2 | 1 | 4 | 2 | 1 | 0 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | 63 | 76 | 51 | 31 | 58 | 86 | 42 | 43 | 37 | 46 |
| RSD (preferred) | 8 | 6 | 18 | 8 | 0 | 0 | 4 | 43 | 2 | 46 |
| CPUE (total) | 22 | 17 | 15 | 5 | 10 | 3 | 12 | 10 | 22 | 5 |
| CPUE \geq Stock | 21 | 16 | 14 | 4 | 8 | 2 | 9 | 9 | 20 | 4 |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 97 | 127 | 109 | 96 | 103 | 100 | 114 | 91 | 99 | 92 |
| Quality | 97 | 115 | 103 | 93 | 107 | 100 | 103 | 92 | 102 | 91 |
| Preferred | 104 | 110 | 105 | 98 | - | - | 116 | 91 | 97 | 94 |
| Memorable | 111 | - | - | - | - | - | - | - | - | - |

White Crappie

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Recruitment (trap netting) | | | | | | | | | | |
| Substock CPUE | 1.5 | 0.6 | 0.6 | 6.0 | 3.2 | 0.2 | 0.8 | 2.2 | 3.0 | 0.2 |
| Density (trap netting) | | | | | | | | | | |
| PSD ^a | 97 | 98 | 95 | 100 | 83 | 76 | 77 | 25 | 64 | 96 |
| RSD (preferred) ^a | 64 | 92 | 68 | 79 | 70 | 48 | 55 | 23 | 32 | 86 |
| CPUE (total) | 2.7 | 1.5 | 1.5 | 9 | 6.5 | 2.9 | 2.5 | 3.5 | 4.95 | 1.3 |
| CPUE \geq Stock | 1.2 | 0.9 | 0.9 | 2.7 | 3.3 | 2.7 | 1.7 | 1.3 | 1.9 | 1.2 |
| CPUE \geq MLL (10-inches) | 0.7 | 0.5 | 0.6 | 1 | 0.7 | 1.5 | 1 | 0.3 | 0.6 | 0.5 |
| Growth (electrofishing) (white crappie) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | 169 | - | - | - |
| Length Age-3 | - | - | - | - | - | - | 283 | - | - | - |
| Condition (trap netting) | | | | | | | | | | |
| Stock | 91 | 87 | 95 | 89 | 87 | 98 | 86 | 91 | 93 | 109 |
| Quality | 95 | 98 | 100 | 87 | 88 | 97 | 88 | 93 | 92 | 129 |
| Preferred | 87 | 102 | 99 | 91 | 88 | 99 | 88 | 79 | 91 | 112 |
| Memorable | - | 99 | 95 | 89 | 87 | 90 | 78 | 85 | 99 | 99 |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | 0.65 | - | - | - |

^a Targetted Electrofishing

Sauger

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------------------|--------|--------|--------|------|--------|------|--------|--------|------|------|
| Density (gill netting) | | | | | | | | | | |
| CPUE (total) | - | - | - | - | - | - | - | - | - | - |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | 59,654 | 37,676 | 39,382 | 0 | 45,872 | 0 | 57,141 | 51,429 | - | - |
| #/Acre | 8.0 | 5.1 | 5.3 | 0.0 | 6.2 | 0.0 | 7.7 | 6.9 | - | - |

Walleye

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------|--------|--------|--------|------|--------|--------|--------|--------|--------|--------|
| Stocking | | | | | | | | | | |
| # | 28,403 | 33,984 | 37,215 | 0 | 54,908 | 15,889 | 14,807 | 98,063 | 74,690 | 46,624 |
| #/Acre | 3.8 | 4.6 | 5.0 | 0.0 | 7.4 | 2.1 | 2.0 | 13.2 | 10.0 | 6.3 |

Striped Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------|---------|--------|---------|--------|--------|--------|--------|--------|--------|--------|
| Stocking | | | | | | | | | | |
| # | 125,387 | 78,736 | 154,914 | 82,534 | 75,134 | 59,376 | 46,116 | 15,908 | 44,847 | 65,927 |
| #/Acre | 16.8 | 10.6 | 20.8 | 11.1 | 10.1 | 8.0 | 6.2 | 2.1 | 6.0 | 8.8 |

Habitat Enhancement - 2016

| Type of Work | Details | Quantity | |
|--------------|---------|----------|-----------|
| | | New | Renovated |
| | | | |
| | | | |
| | | | |

Water Quality Monitoring - 2016

| Parameter | Sampling Period | Water Quality |
|------------------|-----------------|---------------|
| Temperature | July/August | Normal |
| Dissolved Oxygen | July/August | Normal |

Old Hickory Reservoir

Description

Area (acres): 22,500 **Mean Depth (feet):** 32 **Shoreline (miles):** 440

Counties: Davidson, Sumner, Wilson, Trousdale and Smith

Full Pool Elevation (feet-msl): 445 **Winter Pool Elevation (feet-msl):** 444

Dam Completion: 1954

Summary:

Anglers spent a total of 505,767 hours fishing Old Hickory Reservoir in 2016. Bass fishing remains the most popular and accounts for 36 % of the total effort. Anglers spent 184,693 hours fishing for bass on Old Hickory in 2016. Of that, 181,227 hours was spent targeting largemouth bass. Creel surveys revealed a targeted catch/rate of 0.73 largemouth bass per hour, down slightly from 2015 (0.87 fish/hour) but the same as 2014. Tournament bass fishing effort decreased slightly from 22% in 2015 to 18% in 2016.

Annual electrofishing surveys indicated a lower than normal abundance of all sizes of largemouth bass (94/hour). The relative abundance of largemouth bass over 15 inches was low (20/hour). Abundance was also low for fish between 12 and 15 inches. Spring electrofishing indicated a weak age-0 year class in 2016 (6 sub-stock bass/hour). This follows very strong year class in 2015 (42 sub-stock bass/hour). The strong year class in 2015 should compensate for the weaker 2016 year class. It is common to have a weaker year class following such a strong year class. The electrofishing data is a reservoir wide average from many habitat types, while some samples seemed normal, others appeared to be lower than expected. Many factors might explain these changes. Habitat changes such as siltation, hyper-eutrophication in some upper reaches of embayments and the gradual shallowing of some of the embayments. Increased eutrophication and turbidity of the water also make it more difficult for electrofishing dip netters to see stunned fish. Proportional stock density (PSD) and catch per unit effort (CPUE) of stock size bass indicates sufficient and consistent recruitment, for the past several years. Largemouth bass condition decreased slightly across all size classes in 2016. Average weight of largemouth bass reported from creel surveys was 2.3 pounds.

Crappie fishing in Old Hickory Reservoir was the second most popular fishery in 2016. Anglers spent 77,726 hours fishing for crappie in Old Hickory in 2016. White crappie are the predominate species of crappie caught in Old Hickory making up 69% of the total angler catch. Trap net catch was similar (81% white crappie). Relative abundance for all sizes of white crappie was good (2.6/net night), the majority being young-of-year. Angler catch rate for any crappie was high (1.4 crappie/hour) with a mean weight of 0.77 pounds. Fall trap net catch of 2.1 young-of-year/net night indicate a moderate to good 2016 year class. Black crappie contributes 32% of the total crappie catch in 2016 creel surveys.

Old Hickory Reservoir supports a world class striped bass fishery with regular catches of 50 to 60 pound fish. The fishery is difficult to evaluate using standard sampling techniques. However, creel data shows anglers spent 44,673 hours fishing for striped bass in 2016 with a catch rate of 0.19 fish/hour. Fishermen were satisfied with both quality and quantity of the fishery. Average weight of striped bass reported from creel surveys was 8.4 pounds. Good water quality, forage and riverine habitat make Old Hickory Reservoir ideal for striped bass introductions. It is crucial that minimum stocking rates of ten/acre are

maintained to ensure the success of this fishery. In 2016, 269,615 striped bass fingerlings were stocked (11.9/acre).

Sauger fishing on Old Hickory is an important and very popular winter and early spring fishery. Angler effort had declined for over the past ten years to a low of 15,881 angler hours in 2015. 2016 was slightly higher (18,720 hours), however angler catch was low (0.65 sauger/hour). Stocking efforts seem to have an impact, yet stockings have been inconsistent for the past couple of years. Gill netting for sauger is difficult because of unpredictable spring water conditions. High spring flows sometimes prevent personnel from effectively collecting fish below Cordell Hull Dam, where sauger concentrate prior to spawning. 2016 spring gill netting was conducted and all fish went to hatcheries for brood. Approximately 110 sauger were collected for Springfield Hatchery

Walleye stocking in Old Hickory reservoir began in 2004 to enhance this fishery, especially the riverine portion of the reservoir. Stocking rates have varied greatly from 11/acre down to 3, with a mean of 6.8/acre. Hatchery personnel stocked 170,632 walleye fingerlings in 2016 (8 walleye/acre). The giant stocking in 2015 of 359,832 fingerlings (16 walleye/acre) and the good 2016 stocking should result in good year classes. Spring experimental gill netting is scheduled to evaluate stocking success and recruitment. Past gill netting efforts have resulted in only a few walleye. These efforts have been early in the season while collecting sauger brood for spawning. Next year we plan to sample later in the season as water temperatures approach walleye spawning temperatures.

Targeted angler effort for walleye increased in 2016 to 18,644 hours. Effort has steadily increased for the past five years. Intended angler catch rate has averaged 0.2 walleye/hour in 2016. Targeted angler effort for walleye is only slightly less than sauger (18,720 for sauger and 18,644 for walleye), indicating angler acceptance. Angler attitude has been positive with reports of walleye limits and fish caught exceeding ten pounds. Average weight of walleye reported from creel surveys was 3.41 pounds.

Catfish is an important segment of fishing in Old Hickory reservoir. Creel surveys indicate catfishing accounted for 9.5% of the total effort in Old Hickory Reservoir. Catfish anglers spent \$338,580 fishing in 2016. Angler effort decreased slightly in 2016, but anglers spent more. Channel catfish are the most frequently caught and comprise about 77% of the total catch. Average weight of channel catfish has remained relatively constant for the past ten years (two pounds).

Total Effort and Expenditures

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Angling Pressure | | | | | | | | | | |
| Angler Hours | 1,013,566 | 970,509 | 893,724 | 670,816 | 532,271 | 655,796 | 523,113 | 627,743 | 453,649 | 505,767 |
| Angler Hours Per Acre | 45.0 | 43.1 | 39.7 | 29.8 | 23.7 | 29.1 | 23.2 | 27.9 | 20.1 | 22.5 |
| Angler Trips | 218,081 | 208,509 | 187,588 | 149,728 | 119,981 | 146,617 | 117,937 | 150,607 | 101,906 | 109,794 |
| Value of Fishery (angler expenditures creel) | | | | | | | | | | |
| All Species | 3,619,210 | 3,422,680 | 2,572,030 | 2,042,080 | 1,617,950 | 3,113,860 | 1,186,540 | 3,323,000 | 2,330,590 | 706,960 * |

* Data based on 16 total interviews

Black Bass - Old Hickory Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|-----------|-----------|-----------|---------|---------|-----------|---------|---------|-----------|---------|
| Angling Pressure | | | | | | | | | | |
| All Black Bass (hrs) | 424,425 | 434,275 | 358,995 | 250,259 | 197,134 | 261,258 | 209,533 | 219,417 | 164,835 | 184,693 |
| (hrs/acre) | 18.9 | 19.3 | 16.0 | 11.1 | 8.8 | 11.6 | 9.3 | 9.8 | 7.3 | 8.2 |
| Any Black Bass (hrs) | 0 | | 0 | 0 | 0 | 0 | 362 | 1,673 | 283 | 0 |
| (hrs/acre) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 |
| Largemouth Bass (hrs) | 422,354 | 431,904 | 352,613 | 249,440 | 194,093 | 258,725 | 208,213 | 214,712 | 162,008 | 181,227 |
| (hrs/acre) | 18.8 | 19.2 | 15.7 | 11.1 | 8.6 | 11.5 | 9 | 10 | 7 | 8 |
| Smallmouth Bass (hrs) | 2,071 | 2,371 | 5,708 | 819 | 3,041 | 2,533 | 958 | 2,741 | 2,261 | 3,466 |
| (hrs/acre) | 0.1 | 0.1 | 0.3 | 0.0 | 0.1 | 0.1 | 0 | 0 | 0 | 0 |
| Spotted Bass (hrs) | 0 | 0 | 674 | 0 | 0 | 0 | 0 | 291 | 566 | 0 |
| (hrs/acre) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 |
| Tournaments (all black bass) | | | | | | | | | | |
| # Tournaments (BITE) | 4 | 3 | 0 | - | - | - | - | - | - | - |
| Pounds/Angler Day (BITE) | 4.38 | 4.48 | 0 | - | - | - | - | - | - | - |
| Bass/Angler Day (BITE) | 2.24 | 1.98 | 0 | - | - | - | - | - | - | - |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| All Black Bass | 2,110,460 | 1,946,230 | 1,498,460 | 814,400 | 677,200 | 1,782,490 | 451,170 | 606,450 | 1,630,090 | 74,530 |
| Any Black Bass | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| Largemouth Bass | 2,107,680 | 1,945,350 | 1,485,560 | 812,970 | 676,910 | 1,771,520 | 451,170 | 592,880 | 1,611,580 | 74,530 |
| Smallmouth Bass | 2,780 | 880 | 12,900 | 1,430 | 290 | 10,970 | 0 | 13,570 | 18,240 | - |
| Spotted Bass | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |

Largemouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 10 | 20 | 21 | 8 | 12 | 9 | 20 | 6 | 42 | 6 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | 27 | 73 | 58 | 62 | 78 | 67 | 70 | 65 | 67 | 59 |
| RSD (preferred) | 24 | 15 | 16 | 23 | 24 | 25 | 22 | 20 | 30 | 23 |
| CPUE (total) | 157 | 196 | 181 | 127 | 136 | 105 | 145 | 124 | 143 | 94 |
| CPUE \geq Stock | 147 | 177 | 160 | 119 | 124 | 96 | 125 | 118 | 101 | 88 |
| CPUE \geq 15 | 36 | 27 | 27 | 27 | 29 | 24 | 27 | 24 | 30 | 20 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | 5.4 | - | - | - | - |
| Length Age-3 | - | - | - | - | - | 12.9 | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 94 | 97 | 94 | 87 | 97 | 88 | 95 | 95 | 100 | 89 |
| Quality | 94 | 101 | 100 | 92 | 102 | 90 | 98 | 90 | 101 | 85 |
| Preferred | 94 | 99 | 103 | 95 | 106 | 97 | 100 | 95 | 97 | 88 |
| Memorable | 95 | 100 | 108 | 99 | 101 | 100 | 103 | 100 | 102 | 97 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0.9 | 1.2 | 1 | 0.8 | 0.9 | 0.72 | 0.78 | 0.71 | 0.87 | 0.73 |
| Harvest Rate (intended) | 0.1 | 0.1 | 0.1 | 0.07 | 0.07 | 0.08 | 0.08 | 0.07 | 0.09 | 0.09 |
| % Released | 91.5 | 95.3 | 92.3 | 87.4 | 90.2 | 85.9 | 90.1 | 89.3 | 86.1 | 84 |
| Mean Weight | 1.9 | 2 | 1.8 | 2 | 1.91 | 1.91 | 2.35 | 2.25 | 1.98 | 2.33 |

White Crappie

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------------------------------------------|---------|---------|---------|---------|---------|---------|--------|---------|--------|--------|
| Recruitment (trap netting) | | | | | | | | | | |
| Substock CPUE | 2.6 | 0.9 | 2.6 | 3.3 | 1.4 | 0.8 | 1.8 | 1.3 | 2.33 | 2.1 |
| Density (trap netting (t) /electrofishing (e)) | | | | | | | | | | |
| PSD (e) | 100 | 94 | 99 | 98 | 97 | 98 | 97 | 99 | 100 | 100 |
| RSD (preferred) (e) | 65 | 82 | 68 | 60 | 54 | 85 | 77 | 78 | 83 | 94 |
| CPUE (total) (t) | 3.5 | 2.5 | 3.6 | 5.1 | 3.3 | 2.7 | 2.7 | 1.8 | 2.95 | 2.6 |
| CPUE ≥ Stock (t) | 0.8 | 1.6 | 1 | 1.9 | 1.9 | 1.9 | 1 | 0.6 | 1.15 | 0.53 |
| CPUE ≥ MLL (10-inches) (t) | 0.2 | 0.8 | 0.4 | 0.6 | 0.5 | 1 | 0.7 | 0.4 | 0.53 | 0.2 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | 166 | - | - | - | - | - |
| Length Age-3 | - | - | - | - | 283 | - | - | 289 | - | - |
| Condition (trap netting) | | | | | | | | | | |
| Stock | 90 | 94 | 81 | 80 | 85 | 89 | 94 | 99 | 102 | 99 |
| Quality | 92 | 102 | 97 | 88 | 86 | 94 | 97 | 90 | 109 | 100 |
| Preferred | 89 | 98 | 99 | 93 | 81 | 94 | 89 | 129 | 103 | 100 |
| Memorable | 88 | 97 | 95 | 86 | 76 | 88 | 81 | 100 | 105 | 99 |
| Blacknose Black Crappie Stocking | | | | | | | | | | |
| # | 0 | 29,552 | 0 | 0 | 61,048 | 68,708 | 70,036 | 192,578 | 0 | 0 |
| #/Acre | 0.0 | 1.3 | 0.0 | 0.0 | 2.7 | 3.1 | 3.1 | 8.6 | 0.0 | 0.0 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 134,570 | 105,202 | 168,874 | 104,013 | 77,696 | 149,715 | 80,894 | 91,269 | 71,428 | 77,726 |
| Angler Hours/Acre | 6.0 | 4.7 | 7.5 | 4.6 | 3.5 | 6.7 | 3.6 | 4.0 | 3.2 | 3.5 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 1.5 | 1.3 | 1.6 | 1.2 | 1.6 | 1.2 | 1.64 | 1.2 | 1.33 | 1.41 |
| Harvest Rate (any crappie) | 0.6 | 0.6 | 0.63 | 0.39 | 0.52 | 0.45 | 0.82 | 0.75 | 0.48 | 0.57 |
| % Released (w hite crappie) | 59.3 | 61.8 | 58.4 | 55.6 | 64.8 | 60.8 | 49.7 | 35.2 | 57.6 | 45.8 |
| Mean Weight (w hite crappie) | 0.7 | 0.9 | 0.76 | 0.89 | 0.89 | 0.71 | 0.8 | 0.8 | 0.8 | 0.77 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | 368,970 | 367,510 | 315,720 | 221,950 | 156,100 | 204,310 | 66,780 | 275,700 | - | - |

Bluegill

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|---------|---------|--------|--------|--------|--------|--------|--------|-------|--------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all sunfish) | 70,707 | 40,453 | 32,055 | 27,927 | 16,060 | 20,524 | 13,196 | 18,180 | 6,428 | 10,510 |
| Angler Hours/Acre | 3.1 | 1.8 | 1.4 | 1.2 | 0.7 | 0.9 | 0.6 | 0.8 | 0.3 | 0.5 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any sunfish) | 3.0 | 3.9 | 3.4 | 2.2 | 3.6 | 3.1 | 2.9 | 2.7 | 2.4 | 2.4 |
| Harvest Rate (any sunfish) | 1.2 | 3.5 | 1.1 | 0.3 | 0.8 | 1.1 | 1.0 | 1.6 | 1.0 | 1.9 |
| % Released (bluegill) | 75.2 | 85.0 | 79.7 | 81.1 | 84.9 | 81.4 | 81.2 | 53.4 | 70.5 | 49.2 |
| Mean Weight (bluegill) | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.3 | 0.2 | 0.2 | 0.3 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Sunfish | 119,920 | 115,900 | 59,180 | 68,810 | 18,910 | 57,100 | 15,170 | - | - | - |

Sauger

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|---------|---------|--------|--------|---------|---------|---------|---------|--------|----------|
| Density (gill netting) | | | | | | | | | | |
| PSD | 91 | 40 | 84 | 91 | 26 | 50 | 49 | 77 | - | - |
| RSD (preferred) | 21 | 10 | 13 | 38 | 4 | 3 | 5 | 7 | - | - |
| CPUE (total) | 13 | 11 | 14 | 2.8 | 21 | 10 | 4.4 | 2.56 | - | - |
| CPUE \geq Stock | 13 | 11 | 14 | 2.8 | 21 | 9.9 | 4.4 | 2.56 | - | - |
| CPUE \geq MLL (15-inches) | 3 | 1 | 2 | 1 | 1 | 0.3 | 0.2 | 0.17 | - | - |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-1 | - | 11 | 10.9 | | 10.3 | 10.3 | 11 | | - | - |
| Length Age-3 | 14.3 | 14.3 | 15.8 | | 14.7 | 13.9 | 12.7 | | - | - |
| Condition (gill netting) | | | | | | | | | | |
| Stock | 81 | 92 | 93 | 113 | 94 | 82 | 86 | 93 | - | - |
| Quality | 94 | 87 | 96 | 91 | 93 | 85 | 90 | 87 | - | - |
| Preferred | 106 | 83 | 92 | 90 | 95 | 91 | 98 | 95 | - | - |
| Memorable | - | - | - | - | - | | | | | |
| Mortality (gill netting) | | | | | | | | | | |
| Total Mortality | | | 69 | | 50 | 53 | 28 | | - | - |
| Stocking | | | | | | | | | | |
| # | 74,930 | 97,392 | 0 | 63,526 | 157,524 | 92,783 | 255,144 | 253,226 | 18,766 | 44,585 |
| #/Acre | 3.3 | 4.3 | 0.0 | 2.8 | 7.0 | 4.1 | 11.3 | 11.3 | 0.8 | 2.0 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | 45,943 | 32,664 | 30,396 | 28,485 | 20,834 | 31,940 | 21,260 | 16,945 | 15,881 | 18,720 |
| Angler Hours/Acre | 2.0 | 1.5 | 1.4 | 1.3 | 0.9 | 1.4 | 0.9 | 0.8 | 0.7 | 0.8 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 1.6 | 0.8 | 0.8 | 0.5 | 0.7 | 1.2 | 0.85 | 0.72 | 1.28 | 0.65 |
| Harvest Rate (intended) | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.16 | 0.49 | 0.18 |
| % Released | 85.4 | 83.5 | 76.5 | 61.3 | 89.2 | 88.4 | 81.9 | 66.5 | 63.2 | 70.2 |
| Mean Weight | 1.5 | 1.4 | 1.4 | 1.5 | 1.9 | 1.5 | 1.71 | 1.68 | 2.04 | 1.93 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Sauger | 149,700 | 117,340 | 39,470 | 78,680 | 52,920 | 126,870 | 47,330 | 43,630 | 7,300 | 101,270* |

* Based on one interview

Walleye

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|---------|--------|---------|---------|---------|---------|---------|--------|---------|---------|
| Density (gill netting) | | | | | | | | | | |
| CPUE (total) | 2.1 | 1.2 | - | 0.5 | - | 0.4 | 0.1 | - | - | - |
| CPUE ≥ Stock | 2.1 | 1.2 | - | 0.5 | - | 0.4 | 0.1 | - | - | - |
| CPUE ≥ MLL (15-inches) | 0.7 | 0.3 | - | 0.3 | - | 0.2 | 0.1 | - | - | - |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-1 | 12.8 | - | - | - | - | - | - | - | - | - |
| Length Age-3 | 15.8 | - | - | - | - | 17.6 | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | 130,429 | 68,363 | 108,784 | 145,930 | 206,748 | 151,053 | 103,260 | 94,025 | 359,832 | 170,632 |
| #/Acre | 6 | 3 | 5 | 6 | 9 | 7 | 5 | 4 | 16 | 8 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | 12,910 | 6,304 | 13,659 | 18,530 | 16,081 | 8,520 | 6,337 | 9,094 | 14,296 | 18,644 |
| Angler Hours/Acre | 0.6 | 0.3 | 0.6 | 0.8 | 0.7 | 0.4 | 0.3 | 0.4 | 0.6 | 0.8 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0.06 | 0.42 | 0.42 | 0.11 | 0.20 | 0.05 | 0.08 | 0.12 | 0.17 | 0.15 |
| Harvest Rate (intended) | 0.04 | 0.10 | 0.24 | 0.08 | 0.16 | 0.05 | 0.02 | 0.11 | 0.06 | 0.08 |
| % Released | 68.7 | 91.5 | 50.9 | 15.9 | 26.6 | 88.4 | 42.2 | 13.3 | 60.4 | 50.6 |
| Mean Weight | 2.5 | 2.8 | 2.4 | 3.6 | 3.0 | 1.5 | 3.4 | 3.2 | 3.2 | 3.4 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Walleye | 84,400 | 10,410 | 18,530 | 47,260 | 15,870 | 13,920 | - | - | - | - |

Striped Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Stocking | | | | | | | | | | |
| # | 254,653 | 359,378 | 394,369 | 357,830 | 361,657 | 324,093 | 321,480 | 183,911 | 217,595 | 269,615 |
| #/Acre | 11.3 | 16.0 | 17.5 | 15.9 | 16.1 | 14.4 | 14.3 | 8.2 | 9.7 | 11.9 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | 45,943 | 54,870 | 41,473 | 42,548 | 26,207 | 24,142 | 31,969 | 29,634 | 33,010 | 44,673 |
| Angler Hours/Acre | 2.0 | 2.4 | 1.8 | 1.9 | 1.2 | 1.1 | 1.4 | 1.3 | 1.5 | 2.0 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0.20 | 0.18 | 0.16 | 0.11 | 0.15 | 0.15 | 0.13 | 0.23 | 0.20 | 0.19 |
| Harvest Rate (intended) | 0.09 | 0.09 | 0.07 | 0.05 | 0.04 | 0.04 | 0.08 | 0.13 | 0.06 | 0.07 |
| % Released | 58.7 | 51.3 | 76.8 | 45.4 | 76.6 | 75.4 | 41.0 | 45.6 | 64.9 | 54.3 |
| Mean Weight | 5.34 | 8.13 | 10.19 | 12.52 | 6.36 | 10.57 | 6.42 | 10.87 | 9.06 | 8.41 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Striped Bass | 197,010 | 323,530 | 188,880 | 233,050 | 148,790 | 339,270 | 250,650 | 300,440 | 428,590 | 185,150 |

Catfish

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all catfish) | 80,475 | 69,273 | 92,060 | 73,631 | 63,160 | 65,420 | 40,067 | 68,848 | 54,298 | 47,909 |
| Angler Hours/Acre | 3.6 | 3.1 | 4.1 | 3.3 | 2.8 | 2.9 | 1.8 | 3.0 | 2.5 | 2.1 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any catfish) | 0.22 | 0.37 | 0.38 | 0.42 | 0.31 | 0.45 | 0.63 | 0.48 | 0.55 | 0.45 |
| Harvest Rate (any catfish) | 0.17 | 0.32 | 0.22 | 0.27 | 0.18 | 0.26 | 0.54 | 0.37 | 0.43 | 0.29 |
| % Released (channel) | 38.6 | 26.2 | 42.3 | 29.2 | 46.4 | 44.3 | 24.5 | 28.7 | 33.5 | 31.8 |
| Mean Weight (channel) | 2.49 | 2.99 | 2.36 | 2.67 | 1.86 | 2.05 | 2.39 | 2.17 | 2.18 | 2.09 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Catfish | 202,510 | 187,110 | 129,630 | 247,510 | 120,250 | 177,330 | 104,130 | 237,480 | 221,830 | 338,580 |

Habitat Enhancement - 2016

| Type of Work | Details | Quantity | |
|----------------------------|------------------------------------|----------------------------|----------------|
| | | | |
| Corrugated Pipe Structures | 24 New Bouyed Fish Attractor Sites | 15 Structures at each Site | 360 Structures |
| | | | |
| | | | |
| | | | |

Water Quality Monitoring - 2016

| Parameter | Sampling Period | Water Quality | |
|------------------|------------------|---------------|---------------------|
| Temperature | July - September | Good | No thermal stratifi |
| Dissolved Oxygen | July - September | Good | No chemical strat |
| | | | |

J. Percy Priest Reservoir

Description

Area (acres): 14,200 **Mean Depth (feet):** 28 **Shoreline (miles):** 265

Counties: Davidson, Rutherford, and Wilson

Full Pool Elevation (feet-msl): 490 **Winter Pool Elevation (feet-msl):** 483

Dam Completion: 1969

Summary:

J. Percy Priest Reservoir provides a variety of fishing opportunities close to Nashville and Murfreesboro. As a result, fishing pressure on Percy Priest was the highest in the state in 2016 with 31 angler hours/acre for all species combined with largemouth bass accounting for 9 hours/acre. The largemouth bass fishery continues to be very good despite the angling pressure. Largemouth bass fishing was the most popular in 2016 accounting for 29% of the targeted effort. Anglers spent roughly 127,000 hours fishing for largemouth bass and nearly 8,300 hours fishing for smallmouth bass. Tournament bass fishing effort increased slightly from 16% in 2015 to 22% in 2016. Catch rate for anglers targeting largemouth bass has remained constant in recent years ranging from 0.6 to 0.7 fish per hour; however, the 2016 catch rate was the highest in a decade at 0.8 fish/hour. Overall abundance of largemouth bass from spring electrofishing was good at 105 fish/hour. Abundance of sub-stock size (< 8 in.) largemouth bass was low (8/hour) following a high year in 2015 (16/hour). These fish should recruit to the fishery in 2018-2019. Despite low recruitment, electrofishing samples indicated a 10 year high in the abundance of fish greater than the 15 inch minimum length limit (25/hour). This is encouraging for future numbers of large fish.

The popularity of crappie fishing was slightly less than largemouth bass in 2016 (27% of total effort), accounting for 117,876 angling hours. Catch rates for crappie slightly decreased in 2016 to 1.65 crappie/hour (from 1.75 in 2015) but remained above average based on the previous 9 years data. Trap net results in fall 2014 and fall 2015 indicated strong year classes that should provide excellent fishing in fall 2017 and 2018 as they exceed 10 inches.

The majority of the angler catch recorded from creel surveys has historically been white crappie. However, the 2016 creel survey again indicated a species ratio approaching 1:1. Crappie catch from creel surveys in 2016 was comprised of 53% white crappie and 47% black crappie. Catch from fall trap nets and creel survey data indicate a slow progression from a white crappie dominated fishery to a black crappie fishery.

Hybrid striped bass are an important component of the Percy Priest Reservoir fishery, and annual stockings are required to maintain this resource. Fishing for temperate bass accounted for 67,430 angler hours in 2016, with 59,433 of those hours directed toward hybrid (Cherokee) bass. This effort towards hybrid bass is by far the most angling hours for the species over the past 10 years and is likely the result of stockings in 2014 and 2015 which were more than double the average number of fish stocked from 2007-2013. Catch rate from creel surveys in 2016 was good (0.40 fish/angler hour) and relative abundance determined from fall gill netting was the highest in 10 years (10 fish/net night). Recruitment of stocked fish, determined from fall gill net sampling was excellent. Age 0 cherokee bass (2016 year class) were captured at a rate of 4 fish/net night which was the second highest in 10 years. Three out of

the past four years have had higher than average recruitment. Successive strong year classes should ensure good fishing for 2-3 years, since few fish exceed four years old and most fish exceed the minimum length of 15 inches before age 2. Cherokee bass are completely dependent on hatchery stocking and fingerling quality is critically important to insure the success of the fishery.

Striped bass have been stocked into Percy Priest since 1968 and continue to be stocked annually. Stocking rates of striped bass have been reduced in recent years and hybrid striped bass stocking numbers have increased because hybrids are much more capable of coping with warmer summertime water temperatures which results in increased survival. Striped bass are more difficult to sample with conventional sampling gear, thus we depend on creel data to evaluate the fishery. Surprisingly, intended angler hours more than doubled from an all-time low in 2015 to 5,173 hours in 2016, although this amount of effort is still relatively low. The reason for the increase is unknown as stocking numbers have remained consistent since 2013.

Management of catfish on large reservoirs is often difficult and sometimes overlooked. It is an important component to the Percy Priest fishery. As in previous years, creel surveys in 2016 indicated channel catfish made up the majority of the catch (88%). Even though catfishing effort has been steadily declining for the past 10 years, it accounted for 13,146 angler hours in 2016. Economic factors may influence this decline or fisherman may be switching to other species. Creel surveys may slightly under -estimate catfishing effort, since so many catfishermen fish at night.

Bank fishing areas are important on Percy Priest because of the close proximity to several urban areas. These areas are popular for family fishing and recreation. Stewarts Creek and Vivrett Creek are managed for bank fisherman. Fishing piers and fishing trails are continually maintained and fish attractors are added as needed.

Habitat work on Percy Priest in 2016 included planting 451 cypress trees and refurbishing 65 stake beds.

Black Bass, J. Percy Priest Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|---------|-----------|---------|---------|---------|---------|---------|---------|---------|---------|
| Angling Pressure | | | | | | | | | | |
| All Black Bass (hrs) | 252,455 | 270,823 | 223,305 | 164,842 | 167,896 | 152,658 | 129,092 | 126,956 | 120,955 | 135,513 |
| All Black Bass (hrs/acre) | 17.8 | 19.1 | 15.7 | 11.6 | 11.8 | 10.8 | 9.1 | 8.9 | 8.5 | 9.5 |
| Any Black Bass (hrs) | 0 | 1,181 | 0 | 84 | 920 | 209 | 667 | 622 | - | 543 |
| Any Black Bass (hrs/acre) | 0 | 0.1 | 0 | 0 | 0.1 | 0 | 0 | 0 | - | 0 |
| Largemouth Bass (hrs) | 246,207 | 266,450 | 214,157 | 156,848 | 155,689 | 147,782 | 120,527 | 117,263 | 114,731 | 126,671 |
| Largemouth Bass (hrs/acre) | 17.3 | 18.8 | 15.1 | 11 | 11 | 10.4 | 8.5 | 8.3 | 8.1 | 8.9 |
| Smallmouth Bass (hrs) | 6,248 | 2,570 | 8,434 | 7,757 | 10,122 | 4,376 | 7,905 | 8,414 | 6,224 | 8,299 |
| Smallmouth Bass (hrs/acre) | 0.4 | 0.2 | 0.6 | 0.5 | 0.7 | 0.3 | 0.6 | 0.6 | 0.4 | 0.1 |
| Spotted Bass (hrs) | 0 | 622 | 714 | 153 | 1,165 | 291 | 0 | 656 | - | - |
| Spotted Bass (hrs/acre) | 0 | 0 | 0.1 | 0 | 0.1 | 0 | 0 | 0 | - | - |
| Tournaments (all black bass) | | | | | | | | | | |
| # Tournaments (BITE) | 6 | 4 | - | - | - | - | - | - | - | - |
| Pounds/Angler Day (BITE) | 4.81 | 2.32 | - | - | - | - | - | - | - | - |
| Bass/Angler Day (BITE) | 2 | 1.36 | - | - | - | - | - | - | - | - |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| All Black Bass | 914,030 | 1,383,880 | 806,790 | 626,290 | 673,440 | 701,080 | 721,890 | 606,450 | 334,740 | * |
| Any Black Bass | 0 | 4,700 | 0 | 0 | 0 | 0 | 0 | | - | * |
| Largemouth Bass | 894,400 | 1,371,980 | 777,530 | 597,970 | 651,270 | 693,140 | 694,510 | 592,880 | 330,530 | * |
| Smallmouth Bass | 19,630 | 7,200 | 29,260 | 27,680 | 22,170 | 7,940 | 27,380 | 13,570 | 4,210 | * |
| Spotted Bass | 0 | 0 | 0 | 640 | 0 | 0 | 0 | | - | * |

*Insufficient Data – No Interviews

Largemouth Bass, J. Percy Priest Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|--------|--------|--------|--------|--------|------|------|------|------|------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 16 | 13 | 10 | 14 | 12 | 6 | 8 | 17 | 16 | 8 |
| | | | | | | | | | | |
| Density (electrofishing) | | | | | | | | | | |
| PSD | 52 | 71 | 58 | 61 | 71 | 72 | 70 | 73 | 65 | 75 |
| RSD (preferred) | 18 | 22 | 16 | 17 | 21 | 20 | 19 | 20 | 18 | 26 |
| CPUE (total) | 141 | 85 | 84 | 118 | 67 | 107 | 87 | 115 | 112 | 105 |
| CPUE \geq Stock | 125 | 72 | 74 | 104 | 55 | 101 | 79 | 98 | 96 | 97 |
| CPUE \geq MLL (15-inches) | 24 | 16 | 13 | 17 | 11 | 20 | 15 | 20 | 17 | 25 |
| | | | | | | | | | | |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | 7.4 | - | - | - | - | - | - | - | - |
| Length Age-3 | - | 13 | - | - | - | - | - | - | - | - |
| | | | | | | | | | | |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 94 | 91 | 86 | 90 | 89 | 92 | 92 | 91 | 91 | 88 |
| Quality | 92 | 90 | 87 | 87 | 88 | 92 | 92 | 92 | 90 | 90 |
| Preferred | 94 | 96 | 95 | 94 | 94 | 91 | 92 | 92 | 91 | 86 |
| Memorable | 95 | 95 | 96 | 102 | 96 | 94 | 97 | 92 | 95 | 91 |
| | | | | | | | | | | |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | 40 | - | - | - | - | - | - | - | - |
| | | | | | | | | | | |
| Stocking | | | | | | | | | | |
| # | 51,777 | 21,632 | 27,621 | 11,747 | 96,526 | 0 | 0 | 0 | 0 | 0 |
| #/Acre | 3.6 | 1.5 | 1.9 | 0.8 | 6.8 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0.66 | 0.63 | 0.61 | 0.56 | 0.63 | 0.7 | 0.68 | 0.68 | 0.68 | 0.78 |
| Harvest Rate (intended) | 0.05 | 0.04 | 0.03 | 0.03 | 0.04 | 0.04 | 0.09 | 0.08 | 0.07 | 0.1 |
| % Released | 92.1 | 93.1 | 94.5 | 92.7 | 92.3 | 92.7 | 85.6 | 86.6 | 86.9 | 87.1 |
| Mean Weight | 2.47 | 2.63 | 2.66 | 2.47 | 1.91 | 2.2 | 2.58 | 2.56 | 2.58 | 2.58 |

Smallmouth Bass, J. Percy Priest Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------------|------|--------|--------|------|------|------|-------|------|----------|------|
| Stocking | | | | | | | | | | |
| # | 0 | 26,910 | 12,924 | 0 | 0 | 0 | 9,741 | 0 | 6,384.00 | 0 |
| #/Acre | 0 | 1.9 | 0.9 | 0 | 0 | 0 | 0.7 | 0 | 0.4 | 0 |
| | | | | | | | | | | |
| Fishing Success (creel) | | | | | | | | | | |
| | | | | | | | | | | |
| Catch Rate (intended) | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 | 0.17 | 0.12 | 0.12 | 0.16 | 0.1 |
| Harvest Rate (intended) | 0 | 0 | 0.01 | 0 | 0 | 0 | 0 | 0 | 0.05 | 0 |
| % Released | 90.3 | 86.6 | 95.1 | 90.5 | 97 | 92.4 | 93.4 | 81 | 86 | 85.7 |
| Mean Weight | 3.38 | 2.09 | 2.7 | 2.78 | 2.17 | 2.02 | 3.32 | 3.75 | 3.29 | 2.29 |

Spotted Bass, J. Percy Priest Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Recruitment (electrofishing) | | | | | | | | | | |
| | | | | | | | | | | |
| Substock CPUE | 4 | 4 | 1 | 5 | 1 | 0 | 0 | 0 | 1 | 0 |
| | | | | | | | | | | |
| Density (electrofishing) | | | | | | | | | | |
| | | | | | | | | | | |
| PSD | 44 | 60 | 56 | 45 | 64 | 70 | 71 | 61 | 59 | 53 |
| RSD (preferred) | 4 | 6 | 11 | 4 | 2 | 7 | 9 | 14 | 15 | 18 |
| CPUE (total) | 31 | 27 | 38 | 43 | 42 | 20 | 17 | 8 | 8 | 10 |
| CPUE \geq Stock | 27 | 23 | 37 | 39 | 40 | 20 | 17 | 8 | 8 | 9 |
| | | | | | | | | | | |
| Condition (spring electrofishing) | | | | | | | | | | |
| | | | | | | | | | | |
| Stock | 102 | 97 | 95 | 92 | 93 | 96 | 101 | 94 | 96 | 92 |
| Quality | 90 | 94 | 88 | 88 | 90 | 92 | 96 | 93 | 96 | 93 |
| Preferred | 90 | 87 | 83 | 73 | 76 | 92 | 94 | 96 | 98 | 92 |
| | | | | | | | | | | |
| Fishing Success (creel) | | | | | | | | | | |
| | | | | | | | | | | |
| Catch Rate (intended) | - | 1.51 | 0 | 0 | 1.21 | 1.27 | - | 0 | - | - |
| Harvest Rate (intended) | - | 0 | 0 | 0 | 0.36 | 1.27 | - | 0 | - | - |
| % Released | 89.5 | 89.2 | 81.3 | 88.1 | 77.3 | 78.9 | 73.6 | 67.9 | 75.8 | 79.7 |
| Mean Weight | 1.04 | 1.01 | 0.91 | 0.79 | 0.92 | 0.93 | 1.18 | 0.9 | 1.05 | 1.15 |

White Crappie, J. Percy Priest Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Recruitment (trap netting) | | | | | | | | | | |
| Substock CPUE | 0.6 | 1.2 | 3.8 | 1.7 | 0.7 | 0 | 0.1 | 0.6 | 0 | 0.4 |
| Density (trap netting (t) /electrofishing (e)) | | | | | | | | | | |
| PSD (e) | 98 | 98 | 96 | 94 | 97 | 100 | 100 | 100 | 100 | 100 |
| RSD (preferred) (e) | 66 | 54 | 52 | 50 | 79 | 63 | 78 | 94 | 100 | 73 |
| CPUE (total) (t) | 1.3 | 1.6 | 4.2 | 2.9 | 1.3 | 1 | 0.2 | 0.8 | 0.6 | 0.4 |
| CPUE \geq Stock (t) | 0.7 | 0.5 | 0.4 | 1.3 | 0.6 | 1 | 0.2 | 0.2 | 0.6 | 0.2 |
| CPUE \geq MLL (10-inches) (t) | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 0.15 | 0 | 0.05 | 0.03 |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | 7.8 | 7.5 | 7.7 | - | - | - | - | - | - | - |
| Length Age-3 | 10.8 | 10.7 | 10.4 | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 85 | 102 | - | - | - | - | - | 93 | 98 | 96 |
| Quality | 99 | 107 | 99 | - | - | 94 | 103 | | | 91 |
| Preferred | 94 | 105 | 95 | - | - | 90 | 99 | 98 | 86 | 98 |
| Memorable | 91 | 98 | 104 | - | - | 90 | - | 92 | | 99 |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | - | 42 | 48 | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | - | - | 13,572 | - | - | - | - | - | - | - |
| #/Acre | - | - | 1 | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 156,386 | 174,730 | 164,874 | 109,781 | 116,938 | 123,763 | 116,284 | 112,385 | 111,680 | 117,876 |
| Angler Hours/Acre | 11 | 12.3 | 11.6 | 7.7 | 8.2 | 8.7 | 8.2 | 7.9 | 7.9 | 8.3 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 1.23 | 1.28 | 1.56 | 1.4 | 1.72 | 1.93 | 1.64 | 1.4 | 1.75 | 1.65 |
| Harvest Rate (any crappie) | 0.52 | 0.52 | 0.63 | 0.5 | 0.61 | 0.65 | 0.79 | 0.86 | 0.68 | 0.86 |
| % Released (white crappie) | 59.4 | 62.3 | 54.4 | 60.7 | 61.3 | 62.9 | 57.7 | 41.3 | 62.8 | 51.4 |
| Mean Weight (white crappie) | 0.83 | 0.74 | 0.76 | 0.81 | 0.77 | 0.75 | 0.77 | 0.77 | 0.76 | 0.75 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | 395,810 | 348,550 | 354,120 | 315,260 | 300,090 | 546,360 | 272,500 | 95,530 | 31,030 | * |

*Insufficient Data – No Interviews

Black Crappie, J. Percy Priest Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Recruitment (trap netting) | | | | | | | | | | |
| Substock CPUE | 0.9 | 4 | 1.1 | 1.25 | 2.1 | 0.2 | 0.73 | 1.75 | 2.4 | 0.25 |
| Density (trap netting) | | | | | | | | | | |
| PSD | 100 | 95 | 100 | 67 | 33 | 69 | 98 | 36 | 71 | 100 |
| RSD (preferred) | 40 | 22 | 65 | 39 | 7 | 15 | 85 | 10 | 29 | 87 |
| CPUE (total) | 1.1 | 4.2 | 1.5 | 2.1 | 2.8 | 0.5 | 1.1 | 2.8 | 3.53 | 0.04 |
| CPUE \geq Stock | 0.3 | 0.2 | 0.5 | 0.8 | 0.7 | 0.5 | 0.4 | 1.05 | 1.13 | 0.13 |
| CPUE \geq MLL (10-inches) | 0.1 | 0.1 | 0 | 0.3 | 0.1 | 0.1 | 0.2 | 0.1 | 0.33 | 0 |
| Growth (trap netting) | | | | | | | | | | |
| Length Age-2 | 9.1 | 8.8 | 8.9 | - | - | - | - | - | - | - |
| Length Age-3 | 10.8 | 11.1 | 10.7 | - | - | - | - | - | - | - |
| Condition (trap netting) | | | | | | | | | | |
| Stock | 104 | 107 | 102 | - | 93 | 85 | 96 | 97 | 89 | 93 |
| Quality | 102 | 114 | 104 | - | 96 | 91 | 104 | 96 | 93 | 101 |
| Preferred | 104 | 109 | 102 | - | 82 | 93 | 99 | 101 | 87 | 93 |
| Memorable | - | 97 | 95 | - | 89 | - | 90 | 96 | 89 | 86 |
| Stocking | | | | | | | | | | |
| # | 128,514 | 105,303 | 44,980 | 142,268 | 116,288 | 108,216 | 206,437 | 184,617 | 0 | 0 |
| #/Acre | 9.1 | 7.4 | 3.2 | 10 | 8.2 | 7.6 | 14.5 | 8.2 | 0 | 0 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 156,386 | 174,730 | 164,874 | 109,781 | 116,938 | 123,763 | 116,284 | 112,385 | 111,680 | 117,876 |
| Angler Hours/Acre | 11 | 12.3 | 11.6 | 7.7 | 8.2 | 8.7 | 8.2 | 7.9 | 7.9 | 8.3 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 1.23 | 1.28 | 1.56 | 1.4 | 1.72 | 1.93 | 1.64 | 1.4 | 1.75 | 1.65 |
| Harvest Rate (any crappie) | 0.52 | 0.52 | 0.63 | 0.5 | 0.61 | 0.65 | 0.79 | 0.86 | 0.68 | 0.86 |
| % Released (black crappie) | 52 | 49.2 | 44.1 | 56.2 | 61.9 | 37.5 | 44.6 | 34.1 | 50.4 | 39.6 |
| Mean Weight (black crappie) | 0.84 | 0.82 | 0.79 | 0.79 | 0.8 | 0.75 | 0.8 | 0.79 | 0.79 | 0.74 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | 395,810 | 348,550 | 354,120 | 315,260 | 300,090 | 546,360 | 272,500 | 95,530 | 31,030 | * |

*Insufficient Data – No Interviews

Sunfish, J. Percy Priest Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|--------|--------|--------|--------|--------|-------|--------|-------|------|--------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all sunfish) | 20,716 | 23,340 | 19,267 | 21,378 | 19,641 | 8,736 | 10,936 | 9,711 | | 10,213 |
| Angler Hours/Acre | 1.5 | 1.6 | 1.4 | 1.5 | 1.4 | 0.6 | 0.8 | 0.7 | | 0.7 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any sunfish) | 1.94 | 2.31 | 1.66 | 2.37 | 2.94 | 3.19 | 2.78 | 1.12 | 2.37 | 2.25 |
| Harvest Rate (any sunfish) | 0.71 | 1 | 0.97 | 1.13 | 1.28 | 1.53 | 1.16 | 1.49 | 1 | 0.86 |
| % Released (bluegill) | 70.4 | 69.6 | 64.6 | 53.7 | 63.1 | 67.4 | 67 | 60.6 | 63.5 | 53.5 |
| Mean Weight (bluegill) | 0.3 | 0.25 | 0.28 | 0.2 | 0.25 | 0.27 | 0.23 | 0.22 | 0.21 | 0.22 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Sunfish | 41,570 | 53,850 | 33,560 | 25,960 | 28,450 | 1,440 | 13,810 | - | - | * |

*Insufficient Data – No Interviews

Striped Bass, J. Percy Priest Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Recruitment (gill netting) | | | | | | | | | | |
| Substock CPUE | 0 | - | - | 0 | 0.1 | 0.17 | 0 | 0 | | 0 |
| Density (gill netting) | | | | | | | | | | |
| CPUE (total) | 1.3 | - | - | 0.1 | 0.1 | 0.17 | 0.16 | 0.3 | | 0.5 |
| CPUE \geq Stock | 1.3 | - | - | 0.1 | 0 | 0 | 0.16 | 0 | | 0.5 |
| CPUE \geq 15-inches | 1.3 | - | - | 0.1 | 0 | 0 | 0.08 | 0.3 | | 0.05 |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-2 | 21.6 | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | 79,631 | 48,885 | 55,665 | 85,038 | 74,116 | 35,340 | 68,748 | 29,898 | 34,073 | 34,232 |
| #/Acre | 5.6 | 3.4 | 3.9 | 6 | 5.2 | 2.5 | 4.8 | 2.1 | 2.3 | 2.4 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | 27,894 | 26,829 | 28,263 | 12,665 | 8,388 | 5,465 | 5,898 | 4,457 | 2,185 | 5,173 |
| Angler Hours/Acre | 2 | 1.9 | 2 | 0.9 | 0.6 | 0.4 | 0.4 | 0.3 | 0.2 | 0.4 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0.13 | 0.07 | 0.17 | 0.11 | 0.06 | 0 | 0 | 0.03 | 0.12 | 0.02 |
| Harvest Rate (intended) | 0.02 | 0.02 | 0.03 | 0.02 | 0.02 | 0 | 0 | 0 | 0.06 | 0 |
| % Released | 81.6 | 63.7 | 74.9 | 39.9 | 72 | 78.2 | 76.1 | 85.6 | 84.3 | 63.5 |
| Mean Weight | 9.34 | 5.66 | 8.23 | 4.28 | 3.6 | 5.2 | 5.9 | 3.56 | 7.95 | 8.43 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Striped Bass | 106,180 | 86,640 | 70,800 | 59,600 | 14,060 | 250 | 430 | 2,750 | - | * |

*Insufficient Data – No Interviews

Hybrid (Cherokee) Bass, J. Percy Priest Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Recruitment (gill netting) | | | | | | | | | | |
| Age-0 CPUE | 1.8 | - | - | 0.3 | 0.2 | 1.5 | 5.1 | 0.5 | 2.6 | 4 |
| Density (gill netting) | | | | | | | | | | |
| PSD | | | | | 36 | 45 | 31 | 91 | 60 | 62 |
| RSD (preferred) | | | | | 0 | 45 | 29 | 79 | 42 | 60 |
| CPUE (total) | 9.8 | - | - | 4.5 | 1.1 | 2.8 | 7.3 | 4.75 | 7.4 | 10 |
| CPUE \geq Stock | 9.5 | - | - | 4.3 | 0.9 | 1.3 | 6.9 | 0.42 | 7.3 | 9.5 |
| CPUE \geq 15-inches | 8.1 | - | - | 3.7 | 0.6 | 1.3 | 2 | 3.75 | 3.75 | 5.7 |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-2 | 19.1 | - | - | 19 | 19.3 | 20.3 | - | 19.1 | 19.5 | 19.2 |
| Length Age-3 | 21.3 | - | - | 21.5 | 21.6 | 21.6 | 23.1 | 21.1 | 21.6 | 22.8 |
| Condition (gill netting) | | | | | | | | | | |
| Stock | - | - | - | 101 | 99 | 96 | 98.7 | 93.8 | 88.3 | 90 |
| Quality | - | - | - | 93 | 96 | - | 86.3 | 97.5 | 95.6 | 95 |
| Preferred | - | - | - | 87 | 89 | 86 | 91.5 | 98.7 | 86.6 | 131 |
| Memorable | - | - | - | 81 | 84 | 91 | 97.1 | 93.4 | 82.2 | 85 |
| Stocking | | | | | | | | | | |
| # | 44,685 | 69,600 | 116,448 | 101,665 | 110,734 | 86,407 | 106,598 | 217,459 | 192,684 | 113,114 |
| #/Acre | 3.1 | 4.9 | 8.2 | 7.2 | 7.8 | 6.1 | 7.5 | 15.3 | 13.6 | 8 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | 19,343 | 25,669 | 34,072 | 19,732 | 25,819 | 11,721 | 11,419 | 25,449 | 29,580 | 59,433 |
| Angler Hours/Acre | 1.4 | 1.8 | 2.4 | 1.4 | 1.8 | 0.8 | 0.8 | 1.8 | 2.1 | 4.2 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0.29 | 0.52 | 0.48 | 0.28 | 0.18 | 0.08 | 0.4 | 0.38 | 0.57 | 0.4 |
| Harvest Rate (intended) | 0.11 | 0.14 | 0.18 | 0.14 | 0.14 | 0.01 | 0.12 | 0.11 | 0.2 | 0.17 |
| % Released | 73.6 | 69.4 | 66 | 56 | 38.8 | 78.2 | 79.9 | 77.9 | 71.5 | 64.5 |
| Mean Weight | 4.52 | 5.02 | 5.03 | 4.16 | 4.25 | 5.2 | 5.47 | 3.04 | 3.54 | 3.94 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Cherokee Bass | 45,740 | 124,720 | 119,300 | 42,330 | 84,970 | 121,520 | 20,350 | 13,610 | - | * |

Catfish, J. Percy Priest Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|--------|---------|---------|--------|--------|---------|--------|--------|--------|--------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all catfish) | 43,636 | 48,914 | 45,250 | 38,423 | 24,908 | 28,008 | 28,764 | 21,253 | 20,209 | 22,403 |
| Angler Hours/Acre | 3.1 | 3.4 | 3.2 | 2.7 | 1.8 | 2 | 2 | 1.5 | 1.4 | 1.6 |
| | | | | | | | | | | |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any catfish) | 0.3 | 0.3 | 0.2 | 0.37 | 0.29 | 0.36 | 0.21 | 0.34 | 0.32 | 0.26 |
| Harvest Rate (any catfish) | 0.3 | 0.2 | 0.2 | 0.37 | 0.27 | 0.25 | 0.18 | 0.03 | 0.27 | 0.22 |
| % Released (channel) | 23 | 37 | 26.9 | 17.3 | 22 | 42.5 | 24.6 | 31.8 | 31.2 | 29.2 |
| Mean Weight (channel) | 1.65 | 1.58 | 1.92 | 1.71 | 1.67 | 2.07 | 2.06 | 1.76 | 1.94 | 1.87 |
| | | | | | | | | | | |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Catfish | 84,970 | 134,740 | 123,520 | 60,330 | 79,150 | 103,520 | 77,740 | 8,600 | - | * |

Habitat and Enhancement, J. Percy Priest Reservoir

| Type of Work | Details | Quantity | |
|-------------------------|---------------|---------------------|----------------------------------------|
| | | New | Renovated |
| Planted | Cypress Trees | 451 trees @ 4 sites | |
| Rebrushed | | | |
| Checked and Refurbished | 65 stake beds | | Sites downstream of Hobson Pike Bridge |

Water Quality Monitoring, J. Percy Priest Reservoir 2016

| Parameter | Sampling Period | Water Quality |
|------------------|-----------------|---------------|
| Temperature | July to August | normal |
| Dissolved Oxygen | July to August | normal |

Effort and Expenditures, J. Percy Priest Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------|---------|---------|
| Angling Pressure | | | | | | | | | | |
| Angler Hours | 681,397 | 783,969 | 697,239 | 492,224 | 457,914 | 423,797 | 378,199 | 416,833 | 378,235 | 440,836 |
| Angler Hours Per Acre | 48 | 55.2 | 49.1 | 34.7 | 32.2 | 29.8 | 26.6 | 29.4 | 26.6 | 31 |
| Angler Trips | 145,615 | 174,502 | 149,723 | 114,955 | 97,370 | 95,113 | 86,277 | 96,782 | 89,673 | 99,640 |
| Value of Fishery (angler expenditures creel) | | | | | | | | | | |
| All Species | 1,956,150 | 3,422,680 | 1,867,870 | 1,359,420 | 1,369,540 | 1,925,380 | 1,140,920 | 762,360 | 365,690 | * |

*Insufficient Data (low number of interviews)

Normandy Reservoir

Description

Area (acres): 3,048**Mean Depth (feet):** 36.1**Shoreline (miles):** 72**Counties:** Coffee and Bedford**Full Pool Elevation (feet-msl):** 875**Winter Pool Elevation (feet-msl):** 859**Dam Completion:** 1976

Summary:

A yearly creel survey was not conducted in 2016. However, consecutive yearly creel surveys were conducted in 2014 and 2015. In 2015, anglers fished a total of 136,294 hours (44.7 hours/acre) on Normandy Reservoir. This value was only a 5.4 % increase over the previous year's total fishing effort value. However, total fishing effort has fluctuated notably over the past six years; the 2015 total fishing effort value was the highest documented during the last six yearly creel surveys. The increase in total fishing effort in 2015 was the result of a 29.1 % increase in the number of angler trips (2010 to 2015).

Based on 2015 creel data, black bass (largemouth bass, spotted bass, and smallmouth bass) were the most targeted species in Normandy Reservoir, accounting for 49.6 % of the directed angler effort. The mean relative abundance estimate of stock length largemouth bass captured during spring electrofishing samples was 62.3 fish / hour, which rated as "above average" for Normandy Reservoir. Largemouth bass recruitment displayed between year consistency, as indicated by an electrofishing substock relative abundance value of 4.0 fish / hour. The calculated PSD value of 70.0 % indicated a balanced largemouth bass population with an elevated abundance of "quality" length largemouth bass and a moderate abundance of "preferred" length largemouth bass. The aforementioned indicated that the fifteen inch minimum length limit has been successful at providing a quality fishery for anglers. Length frequency data indicated consistent recruitment, a normal length distribution, and a large 2014 year class. Age data from 2016 indicated the continued existence of a quality largemouth bass population. Age data detected eleven consecutive year classes (age-1 to age-11). Mean length at age data indicated above average growth for age-1 largemouth bass, but only average growth for age-3 largemouth bass. To reach the 15.0 inch minimum length limit, largemouth bass ranged in age from four years to five years. The 2016 calculated mortality rate was 31.0 %. In 2017, the Normandy Reservoir largemouth bass fishery will be characterized by moderate abundance, elevated numbers of quality length individuals, and fairly robust individuals.

The yearly mean total abundance of spotted bass (16.0 / hour) varied only minimally from the previous year's value (2015). Historically, yearly mean total abundance values of spotted bass have ranged from a low of 15.0 / hour to a high of 39.0 / hour. However, yearly mean total abundance values of spotted bass have always been lower than yearly mean total abundance values of largemouth bass (23.3 % to 76.5 % lower). But combined, these two species provide the majority of fishing opportunities for black bass anglers. Of the two species, spotted bass have been released at a lower rate (71.4 %) than largemouth bass (79.8 %), yet both rates are considered "high." The mean relative abundance estimate of stock length spotted bass captured during 2016 spring electrofishing samples was 15.0 fish / hour. This value was a 54.9 % decrease from the previous year's value, and rated as "low." Since 2014, recruitment of spotted bass has been moderately variable, as indicated by electrofishing substock relative abundance values ranging from 0.0 fish / hour (2015) to 3.0 fish / hour (2014). Over the past nine years, yearly spotted bass

Summary:

reproduction has been documented; highly successful spawns were documented in 2009 and 2014. Both spawns recruited successfully. The calculated PSD value of 53.0 %, although slightly low, indicated a balanced spotted bass population with a low abundance of “preferred” length spotted bass. Calculated weight indices indicated that spotted bass longer than fifteen inches were in excellent condition. Length frequency data indicated fairly consistent recruitment, a bimodal length distribution, and a limited abundance of spotted bass greater than fifteen inches. Age data from 2016 indicated consistent yearly spotted bass reproduction. Additionally, 2016 age data detected nine consecutive year classes (age-1 to age-9). Mean length at age data indicated slightly below average growth for age-1 and age-3 spotted bass. Furthermore, to reach 15.0 inches in length, the minimal age of spotted bass were seven years. Overall, the growth rate of age-1 to age 9 spotted bass was below average. The 2016 calculated mortality rate of 36.0 % was rated as moderate. The 2017 Normandy Reservoir spotted bass fishery will be characterized by low abundance, elevated numbers of quality length individuals, and an increase in robust individuals.

Rocky substrate, which is the preferred habitat of smallmouth bass, is the least abundant habitat type found in Normandy Reservoir. Furthermore, since Normandy Reservoir is a highly productive reservoir, water clarity is consistently low. Therefore, as a result of limited habitat and low water clarity, smallmouth bass persist at a minimal level of abundance. Documented total relative abundance of smallmouth bass over the past five years has ranged from 1.0 to 3.0 fish / hour. As a result of continued limited relative abundance, age data could not be collected. Lastly, since smallmouth bass are limited in abundance, directed angler effort for smallmouth bass is extremely low compared to directed angler effort for largemouth bass. Supplemental stockings of smallmouth bass have occurred in six of the last ten years, with stocking rates ranging from 0.3 / acre to 5.2 / acre. However, post stocking evaluations and creel data have indicated that these stockings have not enhanced the smallmouth bass fishery of Normandy Reservoir.

The black crappie and white crappie fisheries combined (hereafter crappie fishery) continue to comprise the second most popular fishery on Normandy Reservoir. Based on 2015 creel data, directed effort for crappie was approximately 25.2 % of the total angler directed effort. Assessing crappie population dynamics on Normandy Reservoir has been, and continues to be, problematic. Consequently, the primary means of assessing the crappie population has been by creel data. Since 2008, angler hours per acre have increased by 67.3 %. However, based on the two previous creel surveys (2014 and 2015), the angler catch rate of crappie has decreased by 0.33 crappie / hour. But, the 2015 angler catch rate was still well above one crappie per hour, which rated as “above average.” The mean weight of crappie ranged from 0.85 pounds to 1.03 pounds per crappie. The documented mean weight range was rated as “excellent.” The effect of variable recruitment has been documented in the white crappie population, and continues to be a management issue. White crappie reproduction is sporadic, with successful spawns occurring every four to six years. Black crappie reproduction is less sporadic, and has been, and continues to be, bolstered by yearly stockings. Over the past three years, black crappie stocking rates have exceeded 30.0 / acre. Recruitment of stocked crappie continues to be documented by creel data (the 2015 catch rate of crappie was the second highest documented over the previous ten years). Based on 2016 black crappie age data, consistent recruitment was evident. Black crappie age data indicated a total of five age classes, four of which were consecutive (age-2 to age-5). The absence of age-1 black crappie was the result of gear bias, and not an absence of age-1 crappie. Mean length at age data indicated an excellent growth rate for age-3 black crappie. Mean length at age-3 black crappie was 11.1 inches, which is well above the minimum length limit of ten inches. As a result of limited age classes and limited sample size (N=57), a mortality rate could not be calculated. The crappie fishery in 2017 will be comprised primarily of blacknose black crappie. Crappie abundance will remain moderate; growth rate

will remain elevated, and recruitment to the minimum length limit will remain consistent throughout the year. Anglers will continue to experience higher catch rates throughout the year, and will continue to harvest legal length crappie at a slightly higher rate than normal.

The initial stocking of walleye into Normandy Reservoir occurred in 2007; over the past ten years, one major walleye stocking event per year has occurred. Stocking rates of walleye have ranged from 19.2 / acre to 37.9 / acre. The mean relative abundance estimate of stock length walleye captured during fall gill net samples was 1.3 fish / net night, which rated as “low” for Normandy Reservoir. Since consecutive yearly stockings have occurred since 2007, recruitment of walleye has been very consistent. Over the past five years, the abundance of age-0 walleye has ranged from 0.8 / net night to 3.8 / net night. Although these values are slightly low, they are indicative of consistent yearly recruitment of stocked walleye. The calculated PSD value of 88.5 % indicated an out-of-balance walleye population with a low abundance of “stock” length walleye and an elevated abundance of “quality” length and “preferred” length walleye. The elevated abundance of “quality” length and “preferred” length walleye indicated that the sixteen inch minimum length limit continues to be successful at providing a quality walleye fishery for anglers. Walleye growth rates (mean length at age) have been determined for all walleye collected by gill net samples over the previous eight years. Based on this data, mean length at age for age-1 and age-3 walleye has increased over the previous four years (approximately 0.4 inch increase for age-1 walleye and 0.3 inch increase for age-3 walleye). Over the same four year period (2013—2016), elevated stocking rates (2012, 2013) had been employed, which may have affected the documented growth rates in 2014 and 2015. Calculated condition factors have increased moderately since 2015, with ratings improving from “fair” to “good” for all length categories (with the exception of the stock length category); condition of stock length walleye improved from “good” to “excellent” in 2016. From 2014 to 2015, angling pressure decreased by 20.0 %; additionally, the percent of walleye released by anglers during the same time period decreased by 35.3 %. The decreasing release rate coincides with an increasing abundance of quality and preferred length walleye in the Normandy Reservoir walleye population. The 2016 calculated mortality rate (48.0 %) was considered moderate. The 2017 Normandy Reservoir walleye fishery will be characterized by moderate abundance, elevated numbers of preferred length individuals, and an increased angler harvest rate.

In 2016, numerous habitat enhancements occurred on Normandy Reservoir. All enhancements were completed by TWRA’s region two southern reservoir crew. Extensive work on Normandy Reservoir occurs every other year on a two year rotational basis with the other two southern reservoirs (Woods and Normandy Reservoirs / Tims Ford Reservoir). Bald cypress trees were not planted on Normandy Reservoir in 2016. Christmas trees are regularly added to marked shallow and deep water sites to provide attractors for mature fish to concentrate around for exploitation by anglers. However, in 2016, these marked fish attractor sites were not rebrushed. Artificial fish attractors placed into Normandy Reservoir in 2016 (at new locations) included six PVC structures and thirty-two twin corrugated pipe structures. Spawning benches (for black bass spawning) and stake beds (to concentrate crappie) were placed into Normandy Reservoir in 2016. Forty-seven new spawning benches were created in 2016, and one hundred six preexisting spawning benches were refurbished. Twelve new stake beds were created in 2016, and eleven stake beds were refurbished. The next habitat work on Normandy Reservoir is scheduled for the winter of 2018.

Lakewide Angling Summary, Normandy Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|--------|---------|---------|----------|------|------|---------|---------|------|
| Angling Pressure | | | | | | | | | | |
| Angler Hours | x | 35,387 | 43,316 | 98,443 | 53,464* | x | x | 128,907 | 136,294 | x |
| Angler Hours Per Acre | x | 12.0 | 14.0 | 32.0 | 18* | x | x | 42.3 | 44.7 | x |
| Angler Trips | x | 7,260 | 8,561 | 18,601 | 9,823* | x | x | 25,165 | 26,247 | x |
| Value of Fishery (angler expenditures creel) | | | | | | | | | | |
| All Species | x | x | 265,850 | 541,540 | 179,430* | x | x | 555,030 | 601,150 | x |

Black Bass, Normandy Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|------|--------|---------|---------|---------|------|------|---------|---------|------|
| Angling Pressure | | | | | | | | | | |
| All Black Bass (hrs) | x | 18,353 | 19,629 | 36,459 | 20889* | x | x | 66,208 | 67,673 | x |
| (hrs/acre) | x | 6.0 | 6.4 | 11.9 | 6.9 | x | x | 21.7 | 22.2 | x |
| Any Black Bass (hrs) | x | 18,176 | 17,973 | 32,382 | 20,320 | x | x | 64,990 | 66,747 | x |
| (hrs/acre) | x | 5.9 | 5.9 | 10.6 | 6.7 | x | x | 21.3 | 21.9 | x |
| Largemouth Bass (hrs) | x | 177 | 866 | 2,782 | 42* | x | x | 94 | 674 | x |
| (hrs/acre) | x | 0.1 | 0.3 | 0.9 | 0.0 | x | x | 0.0 | 0.2 | x |
| Smallmouth Bass (hrs) | x | x | x | 94 | 34* | x | x | x | 139 | x |
| (hrs/acre) | x | x | x | 0.0 | 0.0 | x | x | x | 0.0 | x |
| Spotted Bass (hrs) | x | x | 790 | 1,201 | 493* | x | x | 1,124 | 113 | x |
| (hrs/acre) | x | x | 0.3 | 0.4 | 0.2 | x | x | 0.4 | 0.0 | x |
| Tournaments (all black bass) | | | | | | | | | | |
| # Tournaments (BITE) | x | x | x | x | x | x | x | x | x | x |
| Pounds/Angler Day (BITE) | x | x | x | x | x | x | x | x | x | x |
| Bass/Angler Day (BITE) | x | x | x | x | x | x | x | x | x | x |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| All Black Bass | x | x | 151,920 | 238,570 | 103,170 | x | x | 358,700 | 333,070 | x |
| Any Black Bass | x | x | 142,150 | 216,660 | 102,590 | x | x | 354,820 | 325,230 | x |
| Largemouth Bass | x | x | 5,650 | 31,200 | x* | x | x | 100 | 5,960 | x |
| Smallmouth Bass | x | x | x | x | x* | x | x | x | 870 | x |
| Spotted Bass | x | x | 4,120 | 710 | 580* | x | x | 3,780 | 1,010 | x |

Largemouth Bass, Normandy Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|------|------|------|-------|--------|------|------|------|-------|------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 2 | 0 | 0 | 3 | 3 | 4 | 3 | 3 | 0 | 4 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | 75 | 89 | 95 | x | 10 | 78 | 85 | 72 | 65 | 70 |
| RSD (preferred) | 31 | 67 | 68 | 40 | 42 | 37 | 53 | 46 | 40 | 22 |
| CPUE (total) | 30 | 23 | 68 | 47 | 36 | 60 | 46 | 44 | 53 | 66 |
| CPUE \geq Stock | 28 | 23 | 18 | 44 | 33 | 55 | 44 | 41 | 46 | 62 |
| CPUE \geq MLL (15-inches) | 9 | 15 | 13 | 18 | 14 | 19 | 23 | 19 | 24 | 14 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | x | x | x | x | x | x | x | x | x | 7.8 |
| Length Age-3 | x | x | x | x | x | x | x | x | x | 12.8 |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 101 | 105 | * | 98 | 88 | x | 92 | 94 | 96 | 96 |
| Quality | 99 | 101 | 92 | 98 | 93 | 93 | 95 | 95 | 96 | 94 |
| Preferred | 99 | 103 | 99 | 95 | 83 | 83 | 92 | 97 | 95 | 96 |
| Memorable | 113 | 108 | 101 | 100 | 80 | 82 | 94 | 77 | 100 | 92 |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | x | x | x | x | x | x | x | x | x | 31 |
| Stocking | | | | | | | | | | |
| # | 0 | 0 | 0 | 0 | 27,072 | 0 | 0 | 5967 | 0 | 0 |
| #/Acre | 0.0 | 0.0 | 0.0 | 0.0 | 8.9 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | x | 0.28 | 0.12 | 0.56 | 0 | x | x | 0.5 | 0.27 | x |
| Harvest Rate (intended) | x | 0 | 0.02 | 0.08 | 0 | x | x | 0 | 0.07 | x |
| % Released | x | 81.4 | 87.2 | 78.4 | 92.3* | x | x | 77 | 79.8 | x |
| Mean Weight | x | 3 | 3 | 3.4 | 2.8* | x | x | 2.46 | 3.21 | x |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| Largemouth Bass | x | x | 5650 | 31200 | x* | x | x | 100 | 5,960 | x |

Smallmouth Bass, Normandy Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|-------|-------|------|-------|------|------|-------|-------|------|--------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | * | * | * | * | * | 1 | 0 | 3 | 0 | 1 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | * | * | * | * | * | 67 | 100 | 78 | 0 | 50 |
| RSD (preferred) | * | * | * | * | * | 33 | 100 | 56 | 0 | 50 |
| CPUE (total) | * | * | * | * | * | 3 | 1 | 3 | 2 | 2 |
| CPUE \geq Stock | * | * | * | * | * | 2 | 1 | 3 | 1 | 1 |
| CPUE \geq MLL (18-inches) | * | * | * | * | * | 0 | 0 | 0 | 0 | 0 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | * | * | * | * | * | x | x | x | x | x |
| Length Age-3 | * | * | * | * | * | x | x | x | x | x |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | * | * | * | * | * | x | x | 76 | x | x |
| Quality | * | * | * | * | * | x | x | 88 | x | x |
| Preferred | * | * | * | * | * | x | 80 | 75 | x | x |
| Memorable | * | * | * | * | * | x | x | 77 | x | x |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | * | * | * | * | * | x | x | x | x | x |
| Stocking | | | | | | | | | | |
| # | 1,800 | 1,556 | 0 | 4,240 | 0 | 0 | 3,904 | 14390 | 0 | 15,817 |
| #/Acre | 0.6 | 0.5 | 0.0 | 1.4 | 0.0 | 0.0 | 0.3 | 4.7 | 0.0 | 5.2 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | x | x | x | 0 | 0 | x | x | x | 0 | x |
| Harvest Rate (intended) | x | x | x | 0 | 0 | x | x | x | 0 | x |
| % Released | x | 88.7 | 84.9 | * | 100 | x | x | 91 | 77.7 | x |
| Mean Weight | x | * | * | * | * | x | x | 3.03 | 3.1 | x |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| Smallmouth Bass | x | x | x | x | x* | x | x | x | 870 | x |

Spotted Bass, Normandy Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|------|------|------|------|-------|------|------|------|------|------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 2 | 1 | 2 | 15 | 3 | 3 | 1 | 3 | 0 | 1 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | 71 | 80 | 68 | x | 20 | 58 | 89 | 50 | 68 | 53 |
| RSD (preferred) | 29 | 36 | 45 | 25 | 33 | 19 | 36 | 15 | 33 | 11 |
| CPUE (total) | 23 | 16 | 13 | 39 | 18 | 28 | 16 | 36 | 15 | 16 |
| CPUE \geq Stock | 21 | 15 | 10 | 24 | 20 | 25 | 15 | 33 | 13 | 15 |
| CPUE \geq MLL (15-inches) | * | * | * | * | * | 1 | 2 | 1 | 2 | 1 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | x | x | x | x | x | x | x | x | x | 5.3 |
| Length Age-3 | x | x | x | x | x | x | x | x | x | 11.4 |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 104 | 100 | 103 | 103 | 100 | x | 107 | 103 | x | x |
| Quality | * | 100 | 105 | 104 | 104 | x | 100 | 101 | 99 | x |
| Preferred | * | 102 | 100 | 101 | 92 | x | 92 | 97 | 91 | 94 |
| Memorable | * | * | * | * | * | x | x | x | x | x |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | x | x | x | x | x | x | x | x | x | 36 |
| Stocking | | | | | | | | | | |
| # | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| #/Acre | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | x | x | 0.88 | 0.74 | 1.1 | x | x | 0.68 | 0.5 | x |
| Harvest Rate (intended) | x | x | 0.51 | 0.49 | 0.07 | x | x | 0.57 | 0 | x |
| % Released | x | 66.5 | 75.3 | 68.4 | 84.0* | x | x | 52.7 | 71.4 | x |
| Mean Weight | x | 1.2 | 1.3 | 1.3 | 1.4* | x | x | 1.31 | 1.27 | x |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| Spotted Bass | x | x | x | x | x | x | x | x | 1010 | x |

White Crappie, Normandy Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------------------------------------|-------|--------|---------|--------|--------|------|------|---------|---------|------|
| Recruitment (trap netting) | | | | | | | | | | |
| Substock CPUE | x | x | x | x | x | x | x | x | x | x |
| Density (trap netting (t) /electrofishing (e))* | | | | | | | | | | |
| PSD (e)* | 100 | 100 | 0 | x | x | 100 | x | x | x | x |
| RSD (preferred) (e)* | 50 | 100 | 0 | 50 | x | 67 | x | x | x | x |
| CPUE (total) (t)* | x | x | x | x | x | x | x | x | x | x |
| CPUE ≥ Stock (t)* | x | x | x | x | x | x | x | x | x | x |
| CPUE ≥ MLL (10-inches) (t)* | x | x | x | x | x | x | x | x | x | x |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | x | x | x | x | x | x | x | x | x | x |
| Length Age-3 | x | x | x | x | x | x | x | x | x | x |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 98 | x | x | 84 | 108 | x | x | x | x | x |
| Quality | x | x | x | 94 | x | 106 | x | x | x | x |
| Preferred | x | 99 | x | x | 108 | x | x | x | x | x |
| Memorable | x | 101 | x | 75 | x | 89 | x | x | x | x |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | x | x | x | x | x | x | x | x | x | x |
| Stocking | | | | | | | | | | |
| # | 6,887 | 19,761 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| #/Acre | 2.0 | 6.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | x | 11,329 | 14,795 | 19,803 | 18774* | x | x | 27,301 | 34,313 | x |
| Angler Hours/Acre | x | 3.7 | 4.9 | 6.5 | 6.2 | x | x | 9.0 | 11.3 | x |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | x | 0.7 | 0.7 | 0.75 | 1.3* | x | x | 1.67 | 1.34 | x |
| Harvest Rate (any crappie) | x | 0.3 | 0.4 | 0.3 | 0.5* | x | x | 0.7 | 0.62 | x |
| % Released (white crappie) | x | 8 | 34.6 | 22.9 | 65.8* | x | x | 64.9 | 89.9 | x |
| Mean Weight (white crappie) | x | 1 | 1 | 1 | .96* | x | x | 0.7 | 0.85 | x |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | x | x | 111,840 | 46,040 | 52,620 | x | x | 109,380 | 128,140 | x |

Black Crappie, Normandy Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------------------------------------|------|--------|---------|--------|--------|------|------|---------|---------|------|
| Recruitment (trap netting) | | | | | | | | | | |
| Substock CPUE | x | x | x | x | x | x | x | x | x | x |
| Density (trap netting (t) /electrofishing (e))* | | | | | | | | | | |
| PSD (e)* | x | 100 | x | x | x | 100 | 43 | 75 | x | 100 |
| RSD (preferred) (e)* | x | 88 | x | 100 | 50 | 100 | 43 | 50 | x | 100 |
| CPUE (total) (t)* | x | x | x | x | x | x | x | x | x | x |
| CPUE ≥ Stock (t)* | x | x | x | x | x | x | x | x | x | x |
| CPUE ≥ MLL (10-inches) (t)* | x | x | x | x | x | x | x | x | x | x |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | x | x | x | x | x | x | x | x | x | x |
| Length Age-3 | x | x | x | x | x | x | x | x | x | 11.2 |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | x | x | x | 101 | 96 | x | 111 | 148 | x | x |
| Quality | 94 | 119 | x | x | 98 | x | x | 102 | x | x |
| Preferred | 90 | x | x | x | 106 | 96 | x | 111 | x | 102 |
| Memorable | 85 | 92 | x | x | 84 | x | 86 | 89 | x | x |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | * | * | * | * | * | x | x | x | x | x |
| Stocking | | | | | | | | | | |
| # | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| #/Acre | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | x | 11,329 | 14,795 | 19,803 | 18774* | x | x | 27,301 | 34,313 | x |
| Angler Hours/Acre | x | 3.7 | 4.9 | 6.5 | 6.2* | x | x | 9.0 | 11.3 | x |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | x | 0.7 | 0.7 | 0.75 | 1.3* | x | x | 1.67 | 1.34 | x |
| Harvest Rate (any crappie) | x | 0.3 | 0.4 | 0.3 | .5* | x | x | 0.7 | 0.62 | x |
| % Released (black crappie) | x | 5.6 | 68.1 | 30.8 | 55* | x | x | 48.4 | 60.3 | x |
| Mean Weight (black crappie) | x | 1.2 | 1 | 0.9 | .87* | x | x | 0.95 | 1.03 | x |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | x | x | 111,840 | 46,040 | 52,620 | x | x | 109,380 | 128,140 | x |

Blacknose Crappie, Normandy Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------------------------------------|--------|--------|---------|--------|--------|--------|--------|---------|---------|--------|
| Recruitment (trap netting) | | | | | | | | | | |
| Substock CPUE | x | x | x | x | x | x | x | x | x | x |
| Density (trap netting (t) /electrofishing (e))* | | | | | | | | | | |
| PSD (e)* | 100 | 92 | 100 | x | x | 73.3 | 66.3 | 92.9 | 83.3 | 100 |
| RSD (preferred) (e)* | 100 | 68 | 79 | 79 | 54 | 58 | 50 | 63 | 33 | 83 |
| CPUE (total) (t)* | x | x | x | x | x | x | x | x | x | x |
| CPUE \geq Stock (t)* | x | x | x | x | x | x | x | x | x | x |
| CPUE \geq MLL (10-inches) (t)* | x | x | x | x | x | x | x | x | x | x |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | x | x | x | x | x | x | x | x | x | x |
| Length Age-3 | x | x | x | x | x | x | x | x | x | 11.2 |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | * | 107 | x | 93 | 98 | 99 | 110 | 92 | 107 | x |
| Quality | 98 | 108 | 105 | x | 102 | 102 | 110 | 99 | 95 | 104 |
| Preferred | 89 | x | 104 | 94 | 105 | 93 | 99 | 99 | 87 | 95 |
| Memorable | 90 | 100 | 96 | 90 | 92 | 92 | 94 | 97 | x | 91 |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | x | x | x | x | x | x | x | x | x | x |
| Stocking | | | | | | | | | | |
| # | 35,185 | 46,543 | 128,332 | 49,115 | 75,919 | 93,491 | 86,629 | 103,887 | 97,450 | 92,164 |
| #/Acre | 11.5 | 15.3 | 42.1 | 16.0 | 24.9 | 30.7 | 28.4 | 34.1 | 32.0 | 30.2 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | x | 11,329 | 14,795 | 19,803 | 18774* | x | x | 27,301 | 34,313 | x |
| Angler Hours/Acre | x | 3.7 | 4.9 | 6.5 | 6.2* | x | x | 9.0 | 11.3 | x |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | x | 0.7 | 0.7 | 0.75 | 1.3* | x | x | 1.67 | 1.34 | x |
| Harvest Rate (any crappie) | x | 0.3 | 0.4 | 0.3 | .5* | x | x | 0.7 | 0.62 | x |
| % Released (blacknose crappie) | x | 21.3 | 47.2 | 56.9 | 63.2 | x | x | 63.8 | 52.6 | x |
| Mean Weight (blacknose crappie) | x | 1.3 | 1 | 1 | .87* | x | x | 0.97 | 0.94 | x |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | x | x | 111,840 | 46,040 | 52,620 | x | x | 109,380 | 128,140 | x |

Walleye, Normandy Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|--------|--------|---------|---------|--------|--------|--------|---------|--------|--------|
| Recruitment (gill netting) | | | | | | | | | | |
| Age-0 CPUE | 1.3 | 0 | 1 | 0.7 | 0 | 1.4 | 0.75 | 2.2 | 3.8 | 1.5 |
| Density (gill netting) | | | | | | | | | | |
| PSD | * | * | * | * | * | 82.7 | 86.7 | 69.7 | 64.1 | 88.5 |
| RSD (preferred) | * | * | * | * | * | 10 | 13 | 14 | 8 | 13 |
| CPUE (total) | 1.3 | 16 | 14 | 9 | 14 | 8.6 | 8.16 | 8.25 | 10.8 | 13.1 |
| CPUE \geq Stock | 0 | 15 | 13 | 9 | 10.5 | 8.6 | 8.16 | 8.25 | 10.7 | 13 |
| CPUE \geq 16-inches | 0 | 1 | 11 | 6 | 7 | 5.8 | 5.8 | 4.92 | 5.92 | 10.08 |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-1 | x | x | 16.6 | 15.6 | * | 16.7 | 16.3 | 15.9 | 16.2 | 16.7 |
| Length Age-3 | x | x | 21.7 | 20.7 | * | 20.9 | 19.9 | 19.7 | 18.8 | 20.2 |
| Condition (gill netting) | | | | | | | | | | |
| Stock | x | x | 100.0 | 91.0 | 96.0 | 91.0 | 100.0 | 92.4 | 91.7 | 103.1 |
| Quality | x | x | 94.0 | 90.0 | 94.0 | 87.9 | 94.8 | 87.8 | 85.2 | 86.9 |
| Preferred | x | x | 87.0 | 85.0 | 92.0 | 84.0 | 90.1 | 82.5 | 78.1 | 83.8 |
| Memorable | x | x | x | x | x | x | x | x | 70.4 | x |
| Stocking | | | | | | | | | | |
| # | 64,790 | 64,781 | 108,688 | 64,117 | 89,391 | 86,961 | 58,771 | 115,421 | 95,823 | 58,380 |
| #/Acre | 21.0 | 21.0 | 36.0 | 21.0 | 29.0 | 28.5 | 19.3 | 37.9 | 31.4 | 19.2 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | x | 117 | 1,717 | 12,884 | 3275* | x | x | 8,759 | 6,218 | x |
| Angler Hours/Acre | x | 0.0 | 0.6 | 4.2 | 1.1* | x | x | 2.5 | 2.0 | x |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | x | 0.00 | 0.40 | 0.20 | 0.4* | x | x | 0.34 | 0.51 | x |
| Harvest Rate (intended) | x | 0.00 | 0.10 | 0.15 | 0.36* | x | x | 0.17 | 0.35 | x |
| % Released | x | 0 | 77.9 | 28 | 12.8* | x | x | 63.6 | 28.3 | x |
| Mean Weight | x | x | 2.30 | 2.60 | 2.4* | x | x | 2.57 | 2.88 | x |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Walleye | x | x | 980 | 146,420 | 9260* | x | x | 24,950 | 31,000 | x |

2016 Habitat Enhancement - Normandy Reservoir

| | | | | Quantity | |
|-------------------------|----------------------------------------|--|-----|----------|-----------|
| Type of Work | Details | | New | | Renovated |
| Planted | | | | | |
| Rebrushed | | | | | |
| Checked and Refurbished | Spaw ning Benches to Established Sites | | 47 | | 106 |
| Added | PVC Structure | | 6 | | |
| Added | Corrugated Block Structures | | 32 | | |
| Installed | Stake Beds | | 12 | | 11 |
| | | | | | |

2016 Water Quality Monitoring - Normandy Reservoir

| Parameter | | Sampling Period | | Water Quality | |
|------------------|--|-----------------|--|---------------|--|
| Temperature | | July to August | | Normal | |
| Dissolved Oxyged | | July to August | | Normal | |
| | | | | | |

Tims Ford Reservoir

Description

Area (acres): 10,600 **Mean Depth (feet):** 28 **Shoreline (miles):** 265

Counties: Franklin and Coffee

Full Pool Elevation (feet-msl): 888 **Winter Pool Elevation (feet-msl):** 860

Dam Completion: 1970

Summary:

Yearly consecutive creel surveys were last conducted on Tims Ford Reservoir in 2010 and 2011. The last yearly creel survey was completed in 2016. The current creel methodology is to conduct a creel survey on one reservoir for a period of two to four consecutive years, and then redirect the creel survey to the remaining two reservoirs for a period of two to four consecutive years. Based on the results of the most recent yearly creel survey conducted on Tims Ford Reservoir, anglers spent a total of 214,724 hours (20.3 hours / acre) fishing Tims Ford Reservoir. Since 2010, fishing effort has increased by approximately 60.3 %; the exact reason for the notable increase could not be ascertained. The data collected during the next creel survey period will indicate whether or not the increase in fishing effort is continuing.

Based on the results of the 2016 creel survey, black bass accounted for approximately 72.8 % of directed angler effort. The black bass fishery of Tims Ford is comprised of two primary fisheries: largemouth bass and smallmouth bass. Spotted bass have occasionally been collected during standard spring electrofishing samples, but this population persists only at a minimal level. For the most abundant black bass (largemouth bass), the density estimate of stock length largemouth bass collected during 2016 electrofishing samples (6.7 fish / hour) was rated as “low.” Based on the substock abundance estimate of 3.0 fish / hour, largemouth bass recruitment was rated as “low.” The substock abundance estimates from the previous ten years displayed only minimal year-to-year variation. A PSD of 81 indicated the largemouth population to be “out-of-balance,” mainly as a result of an increase in largemouth bass ≥ 12.0 inches. The increase in abundance of largemouth bass > 12.0 inches over the past two years has been the result of successful recruitment, and anglers abiding by the fifteen inch minimum length limit. Length frequency data (2016) indicated the continued existence of a quality largemouth bass population; of all the largemouth bass sampled in 2016, approximately 12.9 % were ≥ 15.0 inches in length. Length frequency data indicated consistent recruitment, a normal length distribution, and large consecutive year classes (2012, 2013, and 2014 year classes). Age data (2016) indicated the largemouth bass population to be in excellent condition. Age data detected eight consecutive year classes (age-1 to age-8). Mean length at age data indicated above average growth for age-1 largemouth bass, and only average growth for age-3 largemouth bass. To reach the 15.0 inch minimum length limit, largemouth bass were four years of age. The growth rate of age-5 to age-8 largemouth bass was slow, but sample size per age class was considered limited. The 2016 calculated mortality rate was 32.0 %, which rated as average. In 2017, the Tims Ford Reservoir largemouth bass fishery will be characterized by low abundance, elevated numbers of quality and preferred length individuals, and individuals in “good” to “excellent” condition.

The clearness of the water and a prevalence of cobble / boulder substrate, which comprise large areas of the middle and lower reaches of the reservoir, provide ideal habitat for smallmouth bass. Although directed angler effort for smallmouth bass is less than that for largemouth bass, the fact that some anglers fish for smallmouth bass specifically indicates the relevance of this fishery to anglers. The habitat utilized by smallmouth bass makes obtaining a representative sample through electrofishing or other methods problematic. Therefore, creel data is the primary data utilized to assess this fishery. Based on 2016 creel data, the harvest rate of smallmouth was minimal; angler release rate of smallmouth bass was approximately 94.0 %. Over the past six years, the mean weight of harvested smallmouth decreased by 12.4 % (to 2.9 pounds). The aforementioned indicated that fish above the 18" minimum length limit were available, but were only being utilized minimally by anglers. Additionally, based on the last age data collected (spring of 2014), the abundance of sub-legal length smallmouth bass (16.0 – 18.0 inches) was elevated (indicating the effectiveness of the minimum length limit regulation). The aforementioned was further validated by 2016 standard spring electrofishing data; the relative abundance of seventeen and eighteen inch smallmouth bass was again elevated. Based on the results of the 2014 age sample, a total of nine year classes were detected (age-2 to age-10); missing year classes were not detected. Weighted mean length at age-3 was 12.4 inches; smallmouth bass did not reach 18.0 inches in length until age-6. Therefore, the growth rate of smallmouth bass was considered slow. Calculated mean weights from 2016 spring electrofishing data indicated smallmouth bass to be in fair condition. Since the current age sample indicated consistent natural reproduction, hatchery stockings of smallmouth bass are not required. If inconsistent natural reproduction is documented, hatchery stockings would be considered as a management option. In 2017, the smallmouth bass population will be characterized by low abundance, and an elevated abundance of seventeen inch and eighteen inch smallmouth bass.

The black crappie and white crappie fisheries combined (hereafter crappie fishery) comprised the second most popular fishery of Tims Ford Reservoir. Directed effort for crappie was approximately 13.1 % of the total angler directed effort. Assessing crappie reproduction on Tims Ford Reservoir has been, and continues to be, problematic. As a result, the primary means of assessing the crappie population has been by creel data. Creel data from 2016 indicated that angling pressure was 28,071 angler hours. This value was the highest documented over the past five creel surveys. Furthermore, the angler catch rate of 1.2 crappie / hour was the second highest documented catch rate since 2011. This value was rated as "average." The mean weight of crappie was 0.82 pounds and was rated as "good." The effect of variable recruitment has been documented in the crappie population, and continues to be a management issue. Crappie reproduction is sporadic, with successful spawns occurring every four to six years. As a result, crappie reproduction has been, and continues to be, bolstered by yearly stockings. In four of the past five years, black crappie stocking rates have exceeded 12.0 fish / acre. White crappie stockings do not occur because of the difficulty in procuring white crappie brood fish. Recruitment of stocked crappie has been documented by creel data; creel data from 2016 indicated a 42.5 % decrease in catch rate since the previous creel survey was conducted in 2011. However, in spite of the decrease in catch rate, the calculated 2016 catch rate was still rated as "good." In 2017, the crappie fishery will be composed primarily of black crappie, will be of moderate abundance, and will continue to experience "above average" growth to and above the 10.0 inch minimum length limit.

The hybrid bass fishery in Tims Ford Reservoir continues to increase in popularity. Both local and out-of-state anglers (from Alabama) have been increasingly pursuing hybrid bass, with many out-of-state anglers using local guide services to help them find and catch hybrid bass. Based on numerous years of forage base data, Tims Ford Reservoir has a moderate abundance of alewife and gizzard shad; threadfin shad abundance continues to display high year-to-year variability. Therefore, the stocking rate of hybrid

bass must be closely monitored. The hybrid bass population continues to be monitored yearly through the use of horizontal gill nets. A length frequency distribution generated from 2016 gill net data indicated that the hybrid striped bass population displayed consistent year-to-year recruitment, had a normal length distribution, and had ample recruitment to lengths above the minimal length limit (sixteen inch to twenty inch length range). However, an elevated abundance of hybrid bass in the thirteen and fourteen inch length groups was not documented by the 2016 length frequency distribution. Total relative abundance was slightly above three hybrids per net night; this value has varied only minimally since 2011. The 2016 age sample (from data collected from individuals captured during 2016 gill net samples) indicated hybrids were greater than sixteen inches by age-2, and over seventeen inches by age-3. Growth rates for both age classes were rated as “below average” and varied appreciably from other middle Tennessee populations. Creel data (2016) indicated angling pressure to be “light”, with identical angler catch rates documented during the previous two creel survey periods. Harvest rate of hybrids was low; the percentage of hybrids released was just above fifty percent. Mean weight of hybrids exceeded five and a half pounds; this value was the highest recorded mean weight documented during the last five creel surveys. In 2017, the hybrid bass fishery will be characterized by slow growth, consistent recruitment, and limited angling pressure.

Initially to exploit the abundant clupeid populations, striped bass have been stocked into Tims Ford Reservoir for numerous decades. Since the equipment and fishing methods are similar, anglers who target hybrid bass also target stripers. As opposed to gill net monitoring of hybrid bass, gill net monitoring of striped bass has been, and continues to be, an ineffective method. Therefore, creel data has historically been utilized to assess the status of the striped bass fishery. Reported angler catch rate and angler harvest rate of adult striped bass were low in 2016, with both values being only slightly above zero. The release rate of striped bass was approximately 44.0 %; mean weight was nine and a half pounds. The 2016 mean weight value was rated as low, although it was the highest value recorded during the last five creel surveys. Age data was collected in 2016, but as a result of a small sample size (N=13), the age data was of limited usefulness. Over the past ten years, consecutive yearly striped bass stockings have occurred. In 2016, 37,532 striped bass fingerlings were stocked into Tims Ford Reservoir. Since 2007, stocking rates have varied only marginally (from 1.5 fish / acre in 2015 to 8.3 fish / acre in 2007). Finally, the striped bass fishery (2017) will not vary significantly (abundance, growth, and age structure) from the previous year.

Stocking of walleye into Tims Ford Reservoir has been occurring yearly over the past two decades. In 2007, as a result of production issues, walleye were not stocked into Tims Ford Reservoir. Based on the lengths of walleye fingerlings at the time of stocking, the total number of stocked walleye can vary greatly. Since 2007, stocking rates of walleye have ranged from 1.6 / acre (2012) to 7.3 / acre (2013). The mean relative abundance estimate of stock length walleye captured during fall 2016 gill net samples was 0.2 fish / net night, which rated as low for Tims Ford Reservoir. Since consecutive yearly stockings have occurred since 2007, recruitment of walleye has been very consistent. Over the last five years, the abundance of age-0 walleye has ranged from 0.3 to 1.6 / hour. Although these values are low, they are indicative of consistent yearly recruitment of stocked walleye. The calculated PSD value of 52.6 % indicated a balanced walleye population, although the abundance of “quality” length and “preferred” length walleye was above average. The aforementioned indicated that the 16-inch minimum length limit remains successful at providing a quality walleye fishery for anglers. During standard gill net samples, walleye growth rates (mean length at age) have been determined from data for all walleye collected in eight of the previous ten years. Based on this data, mean length at age for age-2 walleye has remained slightly above nineteen inches in five of the eight years. For age-3 walleye, mean length at age was above

twenty inches in five of the eight years. Over the same ten year period (2007—2016), moderately variable stocking rates had been employed. The moderately variable stocking rates did not affect the calculated length at age, but the condition of the stocked fingerlings (length and weight of individuals at time of stocking) probably did. Calculated condition factors indicated walleye to be in “fair” to “good” condition. Since 2010, angling pressure has decreased slightly; furthermore, the percent of walleye released by anglers decreased to 52.2 % in 2016. The moderate release rate coincided with a high abundance of quality and preferred length walleye in the walleye populations of Tims Ford Reservoir.

Habitat enhancements on Tims Ford Reservoir by the southern reservoir crew of region two were limited in 2016. Extensive work on Tims Ford Reservoir occurs every other year on a two year rotational basis with the other two southern reservoirs (Woods and Normandy Reservoirs / Tims Ford Reservoir). But, minimal habitat work was conducted in 2016. Initial habitat work entailed the planting of two hundred and twenty bald cypress trees at seven different sites to stabilize shorelines and provide nursery habitat for fish (as the cypress trees mature). Historically, Christmas trees were regularly added to marked shallow and deep water sites to provide attractors for mature fish to concentrate around for exploitation by anglers. However, in 2016, a change in attractor type at marked fish attractor sites was initiated. Eight of the marked attractor sites were reworked with corrugated pipe structures (twelve structures per site, $N_T = 96$). Additional marked sites were not reworked. Spawning benches (for black bass spawning), stake beds (to concentrate crappie), and Christmas trees (to concentrate fish) were not added in 2016. The next year of extensive habitat enhancements for Tims Ford Reservoir will occur in 2017.

Lakewide Angling Summary, Tims Ford Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|--------|--------|------|---------|----------|------|------|------|------|---------|
| Angling Pressure | | | | | | | | | | |
| Angler Hours | 80,673 | 56,407 | x | 85,254 | 45,491* | x | x | x | x | 214,724 |
| Angler Hours Per Acre | 8.0 | 5.0 | x | 8.0 | 4* | x | x | x | x | 20.3 |
| Angler Trips | 15,238 | 11,642 | x | 17,234 | 8,272* | x | x | x | x | 38,758 |
| Value of Fishery (angler expenditures creel) | | | | | | | | | | |
| All Species | x | x | x | 815,790 | 102,870* | x | x | x | x | 941,740 |

Black Bass, Tims Ford Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|--------|--------|------|---------|---------|------|------|------|------|---------|
| Angling Pressure | | | | | | | | | | |
| All Black Bass (hrs) | 48,309 | 26,982 | x | 30,917 | 25,586* | x | x | x | x | 156,384 |
| (hrs/acre) | 4.6 | 2.5 | x | 2.9 | 2.4 | x | x | x | x | 14.8 |
| Any Black Bass (hrs) | 48,116 | 26,671 | x | 22,858 | 23,454 | x | x | x | x | 136,465 |
| (hrs/acre) | 4.5 | 2.5 | x | 2.2 | 2.2 | x | x | x | x | 12.9 |
| Largemouth Bass (hrs) | x | 97 | x | 2,794 | x | x | x | x | x | 3,297 |
| (hrs/acre) | x | 0.0 | x | 0.3 | x | x | x | x | x | 0.3 |
| Smallmouth Bass (hrs) | 193 | 214 | x | 5,265 | 1,944 * | x | x | x | x | 16,622 |
| (hrs/acre) | 0.0 | 0.0 | x | 0.5 | 0.2 | x | x | x | x | 1.6 |
| Spotted Bass (hrs) | x | x | x | x | 188* | x | x | x | x | x |
| (hrs/acre) | x | x | x | x | 0.0 | x | x | x | x | x |
| Tournaments (all black bass) | | | | | | | | | | |
| # Tournaments (BITE) | x | x | x | x | x | x | x | x | x | x |
| Pounds/Angler Day (BITE) | x | x | x | x | x | x | x | x | x | x |
| Bass/Angler Day (BITE) | x | x | x | x | x | x | x | x | x | x |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| All Black Bass | x | x | x | 249,500 | 90,450* | x | x | x | x | 708,130 |
| Any Black Bass | x | x | x | 136,590 | 88,120 | x | x | x | x | 603,050 |
| Largemouth Bass | x | x | x | 32,720 | x | x | x | x | x | 13,900 |
| Smallmouth Bass | x | x | x | 80,190 | 2,330* | x | x | x | x | 91,180 |
| Spotted Bass | x | x | x | x | x | x | x | x | x | x |

Largemouth Bass, Tims Ford Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|------|------|------|--------|-------|------|------|------|------|--------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 1 | 3 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | 80 | 85 | 82 | 77 | 21 | 73 | 83 | 87 | 74 | 81 |
| RSD (preferred) | 41 | 42 | 58 | 40 | 26 | 34 | 37 | 46 | 43 | 38 |
| CPUE (total) | 35 | 15 | 16 | 31 | 13 | 41 | 31 | 39 | 37 | 37 |
| CPUE \geq Stock | 34 | 13 | 15 | 29 | 16 | 38 | 29 | 35 | 35 | 34 |
| CPUE \geq MLL (15-inches) | 13 | 6 | 5 | 11 | 4 | 12 | 11 | 15 | 14 | 13 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | x | x | x | x | x | x | x | x | x | 7.1 |
| Length Age-3 | x | x | x | x | x | x | x | x | x | 13.6 |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 97 | 88 | 85 | 86 | 88 | 83 | 84 | 76 | 87 | 98 |
| Quality | 92 | 83 | 84 | 87 | 91 | 89 | 84 | 85 | 84 | 100 |
| Preferred | 87 | 82 | 84 | 84 | 90 | 74 | 86 | 84 | 85 | 89 |
| Memorable | x | x | 87 | 91 | 82 | 74 | 83 | 77 | x | x |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | x | x | x | x | x | x | x | x | x | 32 |
| Stocking | | | | | | | | | | |
| # | 0 | 0 | 0 | 8,716 | 0 | 0 | 0 | 0 | 0 | 0 |
| #/Acre | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | x | 0 | x | 0.57 | x | x | x | x | x | 0.28 |
| Harvest Rate (intended) | x | 0 | x | 0.02 | x | x | x | x | x | 0.14 |
| % Released | 84 | 86.8 | x | 85.2 | 94.3* | x | x | x | x | 83 |
| Mean Weight | 2.6 | 2.2 | x | 2.3 | 2.3* | x | x | x | x | 2.44 |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| Largemouth Bass | x | x | x | 32,720 | x | x | x | x | x | 13,900 |

Smallmouth Bass, Tims Ford Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|------|------|------|--------|--------|------|------|------|------|--------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 1 | 0 | 0 | 3 | 3 | 1 | 0 | 0 | 0 | 0 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | 78 | 63 | 80 | 78 | 42 | 61 | 86 | 82 | 93 | 82 |
| RSD (preferred) | 50 | 13 | 65 | 66 | 38 | 42 | 52 | 72 | 75 | 72 |
| CPUE (total) | 18 | 2 | 5 | 10 | 4 | 9 | 14 | 9 | 13 | 9 |
| CPUE \geq Stock | 17 | 2 | 4 | 7 | 3 | 8 | 14 | 9 | 13 | 9 |
| CPUE \geq MLL (18-inches) | 2 | 0 | 3 | 5 | 1 | 1 | 2 | 1 | 1 | 2 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | x | x | x | x | x | x | x | x | x | x |
| Length Age-3 | x | x | x | x | x | x | x | x | x | x |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | x | 91 | * | 78 | 79 | 81 | 89 | 82 | 89 | 93 |
| Quality | x | 77 | * | 83 | 88 | 78 | 83 | 75 | 82 | 84 |
| Preferred | 68 | 82 | * | 77 | 85 | 70 | 76 | 73 | 79 | 77 |
| Memorable | 68 | x | * | 80 | 76 | 63 | 68 | 74 | 75 | 75 |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | x | x | x | x | x | x | x | x | x | x |
| Stocking | | | | | | | | | | |
| # | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| #/Acre | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0 | 0.47 | x | 0.46 | 0.77 | x | x | x | x | 0.52 |
| Harvest Rate (intended) | 0 | 0 | x | 0.01 | 0.02 | x | x | x | x | 0.06 |
| % Released | 94.8 | 94 | x | 96.4 | 96.9 | x | x | x | x | 94 |
| Mean Weight | 3 | 3.2 | x | 3 | 3.3* | x | x | x | x | 2.89 |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| Smallmouth Bass | x | x | x | 80,190 | 2,330* | x | x | x | x | 91,180 |

White Crappie, Tims Ford Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------------------------------------|--------|-------|------|--------|--------|------|------|------|------|--------|
| Recruitment (trap netting) | | | | | | | | | | |
| Substock CPUE | 0.6 | 0.1 | 0.0 | 0.0 | 0.0 | x | 0.0 | 0.0 | 0.0 | x |
| Density (trap netting (t) /electrofishing (e))* | | | | | | | | | | |
| PSD (e)* | 100 | 100 | 100 | 100 | x | 100 | 72 | 100 | 100 | 100 |
| RSD (preferred) (e)* | 86 | 100 | 100 | 100 | 67 | 33 | 27 | 67 | 100 | 36 |
| CPUE (total) (t)* | * | * | * | * | * | 0.07 | 0.04 | 0.1 | 0.18 | 0.01 |
| CPUE ≥ Stock (t)* | * | * | * | * | * | 0.06 | 0.01 | 0.0 | 0.01 | 0.01 |
| CPUE ≥ MLL (10-inches) (t)* | * | * | * | * | * | 0 | 0 | 0 | 0 | 0 |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | x | x | x | x | x | x | x | x | x | x |
| Length Age-3 | x | x | x | x | x | x | x | x | x | x |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | x | x | x | 108 | 77 | x | 101 | x | x | x |
| Quality | 92 | x | x | x | x | 95 | 99 | 93 | x | 100 |
| Preferred | 94 | 89 | 97 | 108 | x | 87 | 89 | 94 | x | 101 |
| Memorable | 88 | 90 | x | x | 77 | x | 90 | 90 | 87 | 86 |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | x | x | x | x | x | x | x | x | x | x |
| Stocking | | | | | | | | | | |
| # | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| #/Acre | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 12,197 | 7,867 | x | 10,200 | 3,752* | x | x | x | x | 28,071 |
| Angler Hours/Acre | 1.2 | 0.7 | x | 1.0 | 0.4* | x | x | x | x | 2.7 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 0.52 | 0.94 | x | 1.32 | 2.02 | x | x | x | x | 1.16 |
| Harvest Rate (any crappie) | 0.35 | 0.49 | x | 0.27 | 0.65 | x | x | x | x | 0.62 |
| % Released (w hite crappie) | 12.6 | 16.8 | x | 78.3 | 83.8 | x | x | x | x | 61.5 |
| Mean Weight (w hite crappie) | 1.2 | * | x | 0.7 | 1.0* | x | x | x | x | 0.67 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | 9,160 | x | x | 38,420 | * | x | x | x | x | 90,770 |

Black Crappie, Tims Ford Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------------------------------------|--------|-------|------|--------|--------|------|------|------|------|--------|
| Recruitment (trap netting) | | | | | | | | | | |
| Substock CPUE | 0.4 | 0.5 | 0.0 | 0.0 | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.0 |
| Density (trap netting (t) /electrofishing (e))* | | | | | | | | | | |
| PSD (e)* | 100 | 83 | 89 | x | x | 90 | 83 | 100 | 91 | 100 |
| RSD (preferred) (e)* | 33 | 33 | 56 | x | 28 | 90 | 83 | 56 | 55 | x |
| CPUE (total) (t)* | * | * | * | * | * | 0.08 | 0.2 | 0.2 | 0.3 | 0.03 |
| CPUE ≥ Stock (t)* | * | * | * | * | * | 0.02 | 0.06 | 0.3 | 0.18 | 0.01 |
| CPUE ≥ MLL (10-inches) (t)* | * | * | * | * | * | 0 | 0 | 0 | 0 | 0 |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | x | x | x | x | x | x | x | x | x | x |
| Length Age-3 | x | x | x | x | x | x | x | x | x | x |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | x | 87 | 87 | 94 | 87 | x | x | x | x | x |
| Quality | 91 | 95 | 90 | 96 | 88 | 79 | 91 | 94 | 93 | 101 |
| Preferred | 87 | 78 | 80 | x | 82 | 92 | 80 | 87 | 80 | x |
| Memorable | 87 | 78 | 80 | x | 82 | 87 | 86 | 83 | 80 | x |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | x | x | x | x | x | x | x | x | x | x |
| Stocking | | | | | | | | | | |
| # | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| #/Acre | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 12,197 | 7,867 | x | 10,200 | 3,752* | x | x | x | x | 28,071 |
| Angler Hours/Acre | 1.2 | 0.7 | x | 1.0 | 0.4* | x | x | x | x | 2.7 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 0.52 | 0.94 | x | 1.32 | 2.02 | x | x | x | x | 1.16 |
| Harvest Rate (any crappie) | 0.35 | 0.49 | x | 0.27 | 0.65 | x | x | x | x | 0.62 |
| % Released (black crappie) | 10.7 | 9.6 | x | 66.7 | 71.1* | x | x | x | x | 14 |
| Mean Weight (black crappie) | 0.9 | 0.9 | x | 0.85 | 0.7* | x | x | x | x | 0.91 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | 9,160 | x | x | 38,420 | * | x | x | x | x | 90,770 |

Blacknose Crappie, Tims Ford Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------------------------------------|---------|--------|---------|--------|--------|---------|---------|---------|---------|---------|
| Recruitment (trap netting) | | | | | | | | | | |
| Substock CPUE | 0.1 | 0.4 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Density (trap netting (t) /electrofishing (e))* | | | | | | | | | | |
| PSD (e)* | 100 | 90 | 80 | x | x | 96 | 100 | 100 | 100 | 100 |
| RSD (preferred) (e)* | 50 | 50 | 40 | 19 | 28 | 64 | 63 | 63 | 83 | 100 |
| CPUE (total) (t)* | * | * | * | * | * | 0.07 | 0.15 | 0.1 | 0.06 | 0.1 |
| CPUE \geq Stock (t)* | * | * | * | * | * | 0.06 | 0.11 | 0.0 | 0.04 | 0.07 |
| CPUE \geq MLL (10-inches) (t)* | * | * | * | * | * | 0 | 0.01 | 0 | 0 | 0 |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | x | x | x | x | x | x | x | x | x | x |
| Length Age-3 | x | x | x | x | x | x | x | x | x | x |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | x | 101 | 90 | 92 | 87 | 76 | x | x | x | x |
| Quality | 99 | 89 | 93 | x | 87 | 89 | 85 | 96 | 72 | x |
| Preferred | 86 | 87 | 91 | x | 85 | 88 | 93 | 89 | 86 | x |
| Memorable | x | 81 | 93 | x | 82 | 92 | 83 | 83 | 76 | 97 |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | x | x | x | x | x | x | x | x | x | x |
| Stocking | | | | | | | | | | |
| # | 106,312 | 82,531 | 206,097 | 98,378 | 80,691 | 128,980 | 106,004 | 156,411 | 156,411 | 136,284 |
| #/Acre | 10.0 | 7.8 | 19.4 | 9.3 | 7.6 | 12.2 | 10.0 | 14.8 | 14.8 | 12.9 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 12,197 | 7,867 | x | 10,200 | 3,752* | x | x | x | x | 28,071 |
| Angler Hours/Acre | 1.2 | 0.7 | x | 1.0 | 0.4* | x | x | x | x | 2.7 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 0.52 | 0.94 | x | 1.32 | 2.02 | x | x | x | x | 1.16 |
| Harvest Rate (any crappie) | 0.35 | 0.49 | x | 0.27 | 0.65 | x | x | x | x | 0.62 |
| % Released (blacknose crappie) | 23 | 8.4 | x | 59.9 | 74.3* | x | x | x | x | 51.7 |
| Mean Weight (blacknose crappie) | 1.6 | 1.1 | x | 0.9 | 0.8* | x | x | x | x | 0.89 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | 9,160 | x | x | 38,420 | * | x | x | x | x | 90,770 |

Hybrid (Cherokee) Bass, Tims Ford Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|--------|------|--------|--------|--------|--------|--------|--------|--------|--------|
| Recruitment (gill netting) | | | | | | | | | | |
| Age-0 CPUE | * | * | * | * | * | 0.72 | 0.78 | 0.28 | x | 1.62 |
| Density (gill netting) | | | | | | | | | | |
| PSD | 87 | 100 | 78 | 89 | x | 80.6 | 73.4 | 92.2 | 100 | 52.6 |
| RSD (preferred) | 87 | 100 | 75 | 72 | 98 | 69 | 47 | 59 | 88 | 37 |
| CPUE (total) | 10 | 4 | 2 | 6 | 2 | 3.5 | 2.62 | 2.9 | 1.9 | 3.3 |
| CPUE \geq Stock | 10 | 4 | 2 | 6 | 2 | 3.44 | 2.5 | 2.8 | 1.9 | 3.2 |
| CPUE \geq 15-inches | 8 | 4 | 2 | 3 | 2 | 2.4 | 1.17 | 1.6 | 1.7 | 1.2 |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-2 | 19.4 | x | 19.7 | x | x | 19.8 | 16.2 | 20.4 | 19.2 | 16.5 |
| Length Age-3 | 20.4 | x | 22.2 | 21.3 | x | 20.9 | 14.7 | 21.0 | 19.3 | 17.3 |
| Condition (gill netting) | | | | | | | | | | |
| Stock | 91.0 | x | 88.0 | 89.0 | 98.0 | 85.9 | 98.6 | 92.4 | x | 98.0 |
| Quality | x | x | 97.0 | 97.0 | 92.0 | 85.9 | 90.1 | 89.2 | 93.7 | 85.5 |
| Preferred | 86.0 | 91.0 | 90.0 | 93.0 | 99.0 | 83.7 | 86.4 | 88.7 | 95.2 | 89.1 |
| Memorable | 87.0 | 86.0 | 87.0 | 90.0 | 98.0 | 87.7 | 79.0 | 92.3 | 84.9 | 100.0 |
| Stocking | | | | | | | | | | |
| # | 28,214 | 0 | 51,918 | 34,723 | 24,282 | 16,800 | 25,150 | 29,282 | 77,047 | 33,896 |
| #/Acre | 3.0 | 0.0 | 5.0 | 3.3 | 2.3 | 1.6 | 2.4 | 2.8 | 7.3 | 3.2 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | 665 | 789 | x | 3,218 | 1,868* | x | x | x | x | 2,617 |
| Angler Hours/Acre | 0.1 | 0.1 | x | 0.3 | 0.2* | x | x | x | x | 0.2 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0.54 | 0.36 | x | 0.21 | 0.91 | x | x | x | x | 0.50 |
| Harvest Rate (intended) | 0.03 | 0.30 | x | 0.13 | 0.12 | x | x | x | x | 0.31 |
| % Released | 84.9 | 29.1 | x | 35.3 | 93.1* | x | x | x | x | 52.2 |
| Mean Weight | 5.17 | 4.06 | x | 4.20 | 3.7* | x | x | x | x | 5.76 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Cherokee Bass | x | x | x | 33,430 | 1,330* | x | x | x | x | 5,520 |

Striped Bass, Tims Ford Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Recruitment (gill netting) | | | | | | | | | | |
| Age-0 CPUE | * | * | * | * | * | 0.2 | 0.11 | x | x | 0.06 |
| Density (gill netting) | | | | | | | | | | |
| PSD | 63 | x | 62 | 75 | 100 | 100 | 14 | x | 100 | 55 |
| RSD (preferred) | 0 | x | x | * | 100 | x | x | x | x | x |
| CPUE (total) | 0.3 | 1 | 1 | 0.4 | 0.1 | 0.3 | 0.5 | x | 0.2 | 0.7 |
| CPUE \geq Stock | 0.5 | 1 | 1 | 0.4 | 0.1 | 0.1 | 0.39 | x | 0.2 | 0.6 |
| CPUE \geq 15-inches | x | 0.5 | x | 0.1 | 0.1 | 0.1 | 0.11 | x | 0 | 0.4 |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-2 | 21.6 | x | 20.0 | 22.0 | x | x | 20.3 | x | x | 14.2 |
| Length Age-3 | 24.8 | x | x | 23.5 | x | 24.8 | x | x | x | 24.6 |
| Condition (gill netting) | | | | | | | | | | |
| Stock | 93.0 | 95.0 | 92.0 | 74.0 | x | x | 82.9 | x | 94.4 | 93.8 |
| Quality | 84.0 | x | 83.0 | 76.0 | 101.0 | 95.1 | x | x | x | 91.8 |
| Preferred | x | x | x | x | x | x | x | x | x | x |
| Memorable | * | * | * | * | * | x | x | x | x | x |
| Stocking | | | | | | | | | | |
| # | 87,602 | 69,577 | 49,486 | 57,056 | 29,952 | 30,184 | 43,713 | 29,470 | 15,538 | 37,532 |
| #/Acre | 8.3 | 6.6 | 4.7 | 5.4 | 2.8 | 2.8 | 4.1 | 2.8 | 1.5 | 3.5 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | 5,003 | 5,962 | x | 11,142 | 3,036* | x | x | x | x | 5,849 |
| Angler Hours/Acre | 0.5 | 0.6 | x | 1.1 | 0.3 | x | x | x | x | 0.6 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0.25 | 0.10 | x | 0.11 | 0.25 | x | x | x | x | 0.15 |
| Harvest Rate (intended) | 0.06 | 0.06 | x | 0.09 | 0.11 | x | x | x | x | 0.11 |
| % Released | 86.3 | 47.4 | x | 40.7 | 86.0* | x | x | x | x | 44.1 |
| Mean Weight | 6.70 | 7.13 | x | 5.32 | 4.30 | x | x | x | x | 9.53 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Striped Bass | x | x | x | 42,120 | x | x | x | x | x | 40,100 |

Walleye, Tims Ford Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|--------|------|--------|--------|--------|--------|--------|--------|--------|--------|
| Recruitment (gill netting) | | | | | | | | | | |
| Age-0 CPUE | * | * | * | * | * | 0.72 | 0.78 | 0.28 | x | 1.62 |
| Density (gill netting) | | | | | | | | | | |
| PSD | 87 | 100 | 78 | 89 | x | 80.6 | 73.4 | 92.2 | 100 | 52.6 |
| RSD (preferred) | 87 | 100 | 75 | 72 | 98 | 69 | 47 | 59 | 88 | 37 |
| CPUE (total) | 10 | 4 | 2 | 6 | 2 | 3.5 | 2.62 | 2.9 | 1.9 | 3.3 |
| CPUE \geq Stock | 10 | 4 | 2 | 6 | 2 | 3.44 | 2.5 | 2.8 | 1.9 | 3.2 |
| CPUE \geq 15-inches | 8 | 4 | 2 | 3 | 2 | 2.4 | 1.17 | 1.6 | 1.7 | 1.2 |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-2 | 19.4 | x | 19.7 | x | x | 19.8 | 16.2 | 20.4 | 19.2 | 16.5 |
| Length Age-3 | 20.4 | x | 22.2 | 21.3 | x | 20.9 | 14.7 | 21.0 | 19.3 | 17.3 |
| Condition (gill netting) | | | | | | | | | | |
| Stock | 91.0 | x | 88.0 | 89.0 | 98.0 | 85.9 | 98.6 | 92.4 | x | 98.0 |
| Quality | x | x | 97.0 | 97.0 | 92.0 | 85.9 | 90.1 | 89.2 | 93.7 | 85.5 |
| Preferred | 86.0 | 91.0 | 90.0 | 93.0 | 99.0 | 83.7 | 86.4 | 88.7 | 95.2 | 89.1 |
| Memorable | 87.0 | 86.0 | 87.0 | 90.0 | 98.0 | 87.7 | 79.0 | 92.3 | 84.9 | 100.0 |
| Stocking | | | | | | | | | | |
| # | 28,214 | 0 | 51,918 | 34,723 | 24,282 | 16,800 | 25,150 | 29,282 | 77,047 | 33,896 |
| #/Acre | 3.0 | 0.0 | 5.0 | 3.3 | 2.3 | 1.6 | 2.4 | 2.8 | 7.3 | 3.2 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | 665 | 789 | x | 3,218 | 1,868* | x | x | x | x | 2,617 |
| Angler Hours/Acre | 0.1 | 0.1 | x | 0.3 | 0.2* | x | x | x | x | 0.2 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0.54 | 0.36 | x | 0.21 | 0.91 | x | x | x | x | 0.50 |
| Harvest Rate (intended) | 0.03 | 0.30 | x | 0.13 | 0.12 | x | x | x | x | 0.31 |
| % Released | 84.9 | 29.1 | x | 35.3 | 93.1* | x | x | x | x | 52.2 |
| Mean Weight | 5.17 | 4.06 | x | 4.20 | 3.7* | x | x | x | x | 5.76 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Cherokee Bass | x | x | x | 33,430 | 1,330* | x | x | x | x | 5,520 |

2016 Habitat Enhancement - Tims Ford Reservoir

| | | | | Quantity | |
|-------------------------|------------------------------------------------------|--|--------------------|----------|-----------|
| Type of Work | Details | | New | | Renovated |
| Planted | Cypress Trees | | 220 Trees, 7 Sites | | |
| Rebrushed | Corrugated Pipe Structures to Established Bouy Sites | | 96 Pipe, 8 Sites | | |
| Checked and Refurbished | | | | | |
| Rebrushed | | | | | |
| Added | | | | | |
| Installed | | | | | |

2016 Water Quality Monitoring - Tims Ford Reservoir

| Parameter | | Sampling Period | | Water Quality | |
|------------------|--|-----------------|--|---------------|--|
| Temperature | | July to August | | Normal | |
| Dissolved Oxygen | | July to August | | Normal | |
| | | | | | |

Woods Reservoir

Description

Area (acres): 3,600

Mean Depth (feet): ----

Shoreline (miles): 65

Counties: Franklin and Coffee

Full Pool Elevation (feet-msl): 960

Winter Pool Elevation (feet-msl): 957

Dam Completion: 1952

Summary:

Yearly creel surveys have not been conducted on Woods Reservoir since 2009. From 2006 to 2009, three yearly creel surveys (two concurrent) were conducted. Creel data collected during this four year period indicated an increase in angler hours of approximately 39.2 %. The increase in angler hours from 2006 to 2007 was the result of consecutive crappie year classes recruiting successfully into the harvestable length range and a two-fold increase in effort for largemouth bass. The increase in angler hours from 2007 to 2009 was solely the result of a 9.2 % increase in effort for largemouth bass. The next yearly creel survey will be conducted within the next three years.

Woods Reservoir has two primary fisheries: a crappie fishery and a black bass fishery. The crappie fishery is comprised of a black crappie fishery and a white crappie fishery, while the black bass fishery is comprised of a largemouth bass fishery and a smallmouth bass fishery. As a result of marginal habitat, the smallmouth bass fishery is extremely limited. Based on the result of the last creel survey conducted in 2009, largemouth bass accounted for approximately 66.8 % of directed angler effort. The density estimate of stock length largemouth bass collected during 2016 electrofishing samples rated as "above average." Based on the substock abundance estimate of 3.0 fish / hour, largemouth bass reproduction was rated as "fair." Compared to the substock abundance estimates from the previous ten years, the 2016 value was the lowest documented. Since 2015, the substock abundance value has decreased by 75%. A PSD of 70 indicated the largemouth population to be in balance, mainly as a result of an increase in largemouth bass from 11.0 inches to 14.0 inches. The consistency in abundance of largemouth bass \geq 15.0 inches over the past two years continues to be the result of anglers self-imposing a minimum length limit, and not the result of an enacted law. Length frequency data indicated consistent recruitment, a normal length distribution, and a large 2014 year class. Age data from 2016 indicated the continued existence of a quality largemouth bass population. Age data detected nine consecutive year classes (age-1 to age-9). Mean length at age data indicated above average growth for age-1 largemouth bass, but only average growth for age-3 largemouth bass. The 2016 calculated mortality rate was 25.0%. In 2017, the Woods Reservoir largemouth bass fishery will be characterized by moderate abundance, elevated numbers of quality and preferred length individuals, and individuals of average to above average condition.

Rocky substrate, which is the preferred habitat of smallmouth bass, is limited to a few "points" prior to entering coves in the lower end of Woods Reservoir. As a result of limited habitat, smallmouth bass persist at a minimal level of abundance. Therefore, directed angler effort for smallmouth bass is extremely low compared to largemouth bass. Supplemental stockings did occur in the 1980's and 1990's, but post stocking evaluation indicated that the stockings did not enhance the smallmouth bass fishery of Woods Reservoir.

The black crappie and white crappie fisheries combined (hereafter crappie fishery) comprised the second most popular fishery on Woods Reservoir. Based on 2009 creel data, directed effort for crappie was approximately 29.7 % of the total angler directed effort. Three very strong year classes (2010, 2011, and 2014) and three moderate year classes (2012, 2013, and 2015) has resulted in a crappie fishery with excellent abundance, size structure, and age structure. Furthermore, over the past ten years, only one weak year class (2009) was detected in the Woods Reservoir crappie fishery. In 2009, juvenile relative abundance was low at 0.2 fish / net night. However, the effect of variable recruitment has been fairly uniform, regardless of species. Angler effort, as calculated from the most recent creel data (20007 and 2009) indicated that over the aforementioned three year period, angler hours decreased marginally at 12.2 %. Based on the current status of the crappie fishery, anglers have been satisfied with the 10.0 inch minimum length limit, have been experiencing higher catch rates, and have been harvesting crappie at a higher rate than normal above the minimum length limit. In 2017, angler catch rate and harvest rate will remain elevated as the large 2014 crappie year class recruits into the harvestable length range.

Habitat enhancements have been extensive over the previous eleven years on Woods Reservoir. Bald cypress trees were planted at three different areas to aid in shoreline stabilization, and to provide nursery habitat as these trees mature. Bald cypress tree “post-planting” survival rates (per area) have yet to be evaluated. Stake beds, using wooden stakes, have been installed to provide fishing habitat for crappie anglers. As a result of limited winter drawdown, spawning benches have not been placed into Woods Reservoir. Historically, pine trees were regularly added to both marked shallow and marked deep water fish attractor sites to provide structure for concentrating adult fish. However, during the winter of 2016, the deployment of natural fish attractors (pine trees) was replaced by the deployment of artificial fish attractors (corrugated pipe structures). All four of the “marked” deep water attractor sites and all four of the “marked” shallow water attractor sites were refurbished. Each site received twelve corrugated pipe structures, which resulted in the total deployment of ninety-six corrugated pipe structures. Buoy markers at each fish attractor site were inspected, and all were in good condition. Additional habitat work was not conducted in 2016.

Lakewide Angling Summary, Woods Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|--------|------|---------|------|------|------|------|------|------|------|
| Angling Pressure | | | | | | | | | | |
| Angler Hours | 50,715 | x | 55,861 | x | x | x | x | x | x | x |
| Angler Hours Per Acre | 14.0 | x | 15.0 | x | x | x | x | x | x | x |
| Angler Trips | 10,992 | x | 11,914 | x | x | x | x | x | x | x |
| Value of Fishery (angler expenditures creel) | | | | | | | | | | |
| All Species | x | x | 287,490 | x | x | x | x | x | x | x |

Black Bass, Woods Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|--------|------|---------|------|------|------|------|------|------|------|
| Angling Pressure | | | | | | | | | | |
| All Black Bass (hrs) | 24,130 | x | 33,407 | x | x | x | x | x | x | x |
| (hrs/acre) | 6.6 | x | 9.1 | x | x | x | x | x | x | x |
| Any Black Bass (hrs) | 24,004 | x | 32,425 | x | x | x | x | x | x | x |
| (hrs/acre) | 6.6 | x | 8.9 | x | x | x | x | x | x | x |
| Largemouth Bass (hrs) | 126 | x | 982 | x | x | x | x | x | x | x |
| (hrs/acre) | 0.0 | x | 0.3 | x | x | x | x | x | x | x |
| Smallmouth Bass (hrs) | x | x | x | x | x | x | x | x | x | x |
| (hrs/acre) | x | x | x | x | x | x | x | x | x | x |
| Spotted Bass (hrs) | x | x | x | x | x | x | x | x | x | x |
| (hrs/acre) | x | x | x | x | x | x | x | x | x | x |
| Tournaments (all black bass) | | | | | | | | | | |
| # Tournaments (BITE) | x | x | x | x | x | x | x | x | x | x |
| Pounds/Angler Day (BITE) | x | x | x | x | x | x | x | x | x | x |
| Bass/Angler Day (BITE) | x | x | x | x | x | x | x | x | x | x |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| All Black Bass | x | x | 207,980 | x | x | x | x | x | x | x |
| Any Black Bass | x | x | 204,760 | x | x | x | x | x | x | x |
| Largemouth Bass | x | x | 3,220 | x | x | x | x | x | x | x |
| Smallmouth Bass | x | x | x | x | x | x | x | x | x | x |
| Spotted Bass | x | x | x | x | x | x | x | x | x | x |

Largemouth Bass, Woods Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|------|------|-------|------|------|------|------|------|------|------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 7 | 9 | 8 | 0 | 10 | 7 | 10 | 18 | 12 | 3 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | 60 | 89 | 73 | 29 | 25 | 56 | 54 | 68 | 69 | 70 |
| RSD (preferred) | 16 | 67 | 21 | 11 | 16 | * | 24 | 29 | x | 36 |
| CPUE (total) | 62 | 60 | 60 | 67 | 42 | 55 | 60 | 79 | 75 | 60 |
| CPUE \geq Stock | 56 | 51 | 52 | 31 | 31 | 44 | 50 | 61 | 62 | 45 |
| CPUE \geq (15-inches) | 9 | 11 | 11 | 5 | 5 | 7 | 12 | 17 | 14 | 14 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | x | x | x | x | x | x | x | x | x | 7.1 |
| Length Age-3 | x | x | x | x | x | x | x | x | x | 13.7 |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 87 | 87 | 83 | 83 | 83 | 84 | 81 | 81 | 85 | 84 |
| Quality | 87 | 83 | 81 | 85 | 81 | 84 | 83 | 84 | 86 | 85 |
| Preferred | 89 | 85 | 90 | 82 | 84 | 89 | 95 | 95 | 97 | 96 |
| Memorable | 75 | 103 | 86 | 89 | 79 | 78 | 95 | 99 | 99 | 92 |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | x | x | x | x | x | x | x | x | x | 25 |
| Stocking | | | | | | | | | | |
| # | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| #/Acre | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0.2 | x | 0.64 | x | x | x | x | x | x | x |
| Harvest Rate (intended) | 0 | x | 0.05 | x | x | x | x | x | x | x |
| % Released | 85.1 | x | 83.5 | x | x | x | x | x | x | x |
| Mean Weight | 1.5 | x | 1 | x | x | x | x | x | x | x |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| Largemouth Bass | x | x | 3,220 | x | x | x | x | x | x | x |

Smallmouth Bass, Woods Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | * | * | * | * | * | x | 0 | 1 | 2 | 2 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | * | * | * | * | * | 17 | 29 | 38 | 40 | 74 |
| RSD (preferred) | * | * | * | * | * | x | 29 | 13 | x | 48 |
| CPUE (total) | * | * | * | * | * | 4 | 3 | 7 | 8 | 12 |
| CPUE \geq Stock | * | * | * | * | * | 2 | 2 | 5 | 7 | 10 |
| CPUE \geq MLL (18-inches) | * | * | * | * | * | 0 | 0 | 0 | 0 | 1 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | * | * | * | * | * | x | x | x | x | x |
| Length Age-3 | * | * | * | * | * | x | x | x | x | x |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | * | * | * | * | * | x | 78 | 84 | 82 | x |
| Quality | * | * | * | * | * | 80 | x | 78 | 85 | x |
| Preferred | * | * | * | * | * | x | 87 | 68 | 87 | 79 |
| Memorable | * | * | * | * | * | x | x | 81 | x | 79 |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | * | * | * | * | * | x | x | x | x | x |
| Stocking | | | | | | | | | | |
| # | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| #/Acre | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | x | x | x | x | x | x | x | x | x | x |
| Harvest Rate (intended) | x | x | x | x | x | x | x | x | x | x |
| % Released | * | x | * | x | x | x | x | x | x | x |
| Mean Weight | * | x | * | x | x | x | x | x | x | x |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| Smallmouth Bass | x | x | x | x | x | x | x | x | x | x |

White Crappie, Woods Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------------------------------------|--------|------|--------|------|------|------|-------|------|------|------|
| Recruitment (trap netting) | | | | | | | | | | |
| Substock CPUE | 0.5 | 2.3 | 0.2 | 3.0 | 6.0 | 2.3 | 1.3 | 7.0 | 2.3 | 0.2 |
| Density (trap netting (t) /electrofishing (e))* | | | | | | | | | | |
| PSD (e)* | 100 | 100 | 100 | * | 100 | 75 | 100 | 100 | 100 | 100 |
| RSD (preferred) (e)* | 47 | 100 | 76 | * | 100 | * | 48 | 91 | x | 100 |
| CPUE (total) (t)* | * | * | * | * | * | 2.54 | 1.42 | 7.3 | 2.4 | 0.25 |
| CPUE \geq Stock (t)* | * | * | * | * | * | 0.27 | 0.17 | 0.0 | 0.06 | 0.06 |
| CPUE \geq MLL (10-inches) (t)* | * | * | * | * | * | 0.19 | 0.04 | 0.04 | 0.02 | 0.06 |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | x | x | x | x | x | x | x | x | x | x |
| Length Age-3 | x | x | x | x | x | x | 10.47 | x | x | x |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | x | x | x | * | 88 | 91 | x | x | x | x |
| Quality | 101 | 95 | 99 | * | 88 | 84 | 96 | 96 | 100 | x |
| Preferred | 92 | 97 | 92 | * | x | 89 | 94 | 93 | 92 | 89 |
| Memorable | 78 | 92 | 86 | * | x | x | x | 92 | 65 | 94 |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | x | x | x | x | x | x | 72 | x | x | x |
| Stocking | | | | | | | | | | |
| # | 0 | 0 | 27,019 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| #/Acre | 0.0 | 0.0 | 7.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 18,926 | x | 16,605 | x | x | x | x | x | x | x |
| Angler Hours/Acre | 5.2 | x | 4.5 | x | x | x | x | x | x | x |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 0.75 | x | 0.6 | x | x | x | x | x | x | x |
| Harvest Rate (any crappie) | 0.39 | x | 0.34 | x | x | x | x | x | x | x |
| % Released (w hite crappie) | 18.3 | x | 58.3 | x | x | x | x | x | x | x |
| Mean Weight (w hite crappie) | 0.8 | x | 0.9 | x | x | x | x | x | x | x |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | x | x | 67,580 | x | x | x | x | x | x | x |

Black Crappie, Woods Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------------------------------------|--------|------|--------|------|------|------|------|------|------|------|
| Recruitment (trap netting) | | | | | | | | | | |
| Substock CPUE | 1.1 | 4.0 | 0.0 | 4.0 | 1.4 | 0.2 | 0.7 | 4.4 | 1.7 | 1.3 |
| Density (trap netting (t) /electrofishing (e))* | | | | | | | | | | |
| PSD (e)* | 100 | 100 | 100 | * | 46 | 31 | 100 | 100 | 100 | 100 |
| RSD (preferred) (e)* | 29 | 100 | 64 | * | x | 13 | * | 50 | x | 89 |
| CPUE (total) (t)* | * | * | * | * | * | 0.29 | 0.81 | 4.4 | 1.77 | 1.38 |
| CPUE ≥ Stock (t)* | * | * | * | * | * | 0.06 | 0.1 | 0.1 | 0.06 | 0.08 |
| CPUE ≥ MLL (10-inches) (t)* | * | * | * | * | * | 0 | 0 | 0.04 | 0.02 | 0 |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | x | x | x | x | x | x | x | x | x | x |
| Length Age-3 | x | x | x | x | x | x | 8.62 | x | x | x |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | x | x | x | * | 86 | 86 | x | x | x | x |
| Quality | 99 | 94 | 96 | * | x | 79 | 89 | 87 | x | 94 |
| Preferred | 91 | 90 | 86 | * | x | 77 | x | 86 | 86 | 91 |
| Memorable | 85 | 62 | 86 | * | x | x | x | x | x | 72 |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | x | x | x | x | x | x | 69 | x | x | x |
| Stocking | | | | | | | | | | |
| # | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| #/Acre | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 18,926 | x | 16,605 | x | x | x | x | x | x | x |
| Angler Hours/Acre | 5.2 | x | 4.5 | x | x | x | x | x | x | x |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 0.75 | x | 0.6 | x | x | x | x | x | x | x |
| Harvest Rate (any crappie) | 0.39 | x | 0.34 | x | x | x | x | x | x | x |
| % Released (black crappie) | 4.4 | x | 51.4 | x | x | x | x | x | x | x |
| Mean Weight (black crappie) | 0.8 | x | 0.8 | x | x | x | x | x | x | x |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | x | x | 67,580 | x | x | x | x | x | x | x |

Blacknose Crappie, Woods Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------------------------------------|--------|------|---------|------|------|------|------|------|------|------|
| Recruitment (trap netting) | | | | | | | | | | |
| Substock CPUE | 0.1 | 0.2 | 0.0 | 0.3 | 0.4 | x | 0.1 | 0.4 | 0.1 | 0.1 |
| Density (trap netting (t) /electrofishing (e))* | | | | | | | | | | |
| PSD (e)* | 100 | 100 | 100 | * | x | 0 | 100 | 100 | 100 | 100 |
| RSD (preferred) (e)* | 0 | 93 | 33 | * | 25 | * | * | 54 | x | 60 |
| CPUE (total) (t)* | * | * | * | * | * | x | 0.06 | 0.4 | 0.1 | 0.17 |
| CPUE ≥ Stock (t)* | * | * | * | * | * | x | 0.06 | 0.0 | 0 | 0.04 |
| CPUE ≥ MLL (10-inches) (t)* | * | * | * | * | * | x | 0 | 0.04 | 0 | 0 |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | x | x | x | x | x | x | x | x | x | x |
| Length Age-3 | x | x | x | x | x | x | x | x | x | x |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | x | x | x | * | 98 | 88 | x | x | x | x |
| Quality | 98 | 98 | x | * | 93 | x | 83 | 90 | 99 | 95 |
| Preferred | x | x | 90 | * | 78 | x | x | 85 | 93 | 83 |
| Memorable | x | x | 16 | * | x | x | x | x | 86 | 88 |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | x | x | x | x | x | x | x | x | x | x |
| Stocking | | | | | | | | | | |
| # | 0 | 0 | 126,377 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| #/Acre | 0.0 | 0.0 | 35.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 18,926 | x | 16,605 | x | x | x | x | x | x | x |
| Angler Hours/Acre | 5.2 | x | 4.5 | x | x | x | x | x | x | x |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 0.75 | x | 0.6 | x | x | x | x | x | x | x |
| Harvest Rate (any crappie) | 0.39 | x | 0.34 | x | x | x | x | x | x | x |
| % Released (blacknose crappie) | 20.4 | x | 43.5 | x | x | x | x | x | x | x |
| Mean Weight (blacknose crappie) | 0.8 | x | 0.9 | x | x | x | x | x | x | x |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | x | x | 67,580 | x | x | x | x | x | x | x |

2016 Habitat Enhancement - Woods Reservoir

| | | | | Quantity | |
|-------------------------|-------------------------------------------|--|------------------|----------|-----------|
| Type of Work | Details | | New | | Renovated |
| Planted | | | | | |
| Rebrushed | Corrugated Pipe to Established Bouy Sites | | 96 Pipe, 8 Sites | | |
| Checked and Refurbished | | | | | |
| Added | | | | | |
| Installed | | | | | |
| | | | | | |

2016 Water Quality Monitoring - Woods Reservoir

| Parameter | | Sampling Period | | Water Quality | |
|------------------|--|-----------------|--|---------------|--|
| Temperature | | July to August | | Normal | |
| Dissolved Oxyged | | July to August | | Normal | |
| | | | | | |

REGION 3

Center Hill Reservoir (Annual Report 2016)

Description

Area (acres): 18,220 **Mean Depth (feet):** 73 **Shoreline (miles):** 415

Counties: Dekalb, Putnam, Warren, White

Full Pool Elevation (feet-msl): 648 **Winter Pool Elevation (feet-msl):**

Dam Completion: 1948

Summary:

In 2008, a drawdown was instituted on Center Hill Reservoir by the U.S. Army Corps of Engineers (USACE) to facilitate repair to Center Hill Dam. The completion of this ongoing project is projected to be complete around the years 2018-2019, although the completion date has moved out from predictions more than once. The lake levels continue to be operated between elevation 630 feet above mean sea level (MSL) in the summer and no lower than elevation 618-MSL during the late fall and early winter. Normal full pool level is 648 feet-MSL. During the period of this drawdown, there have been noticeable increases in terrestrial vegetation and small trees (i.e. willow bushes) along the shoreline. This should create great habitat for various fish species, especially juvenile fish upon the initial fill of the reservoir. This would be a good time to stock greater numbers of traditionally stocked fish into the reservoir as well as other available gamefish that inhabit Center Hill Reservoir. There were 16 brushed fish attractor sites completed in Center Hill Reservoir in 2016. This effort was in alliance with the 5 year strategic plan. These fish attractor coordinates will be available on the TWRA website and should facilitate an increased success for anglers seeking fish that are structure oriented.

Largemouth bass (LMB): The largemouth bass fishery is stable and should provide good fishing opportunities for 2017. According to the roving creel surveys, angling pressure for black bass (largemouth, smallmouth and spotted bass) at Center Hill has remained consistent for the last ten years with an average effort of 5.59 hours/acre expended in 2016 in pursuit of "black bass". Electrofishing surveys were conducted in 2015 and are scheduled to be conducted again in 2017 per the bi-annual electrofishing work schedule. In 2009, age one largemouth bass CPUE via electrofishing was at a higher rate (3.4lmb/hour) than experienced over the previous ten years. The overall CPUE (lmb/hr.) for largemouth bass collected via electrofishing in 2015 was 25.8 lmb/hr, the highest in the past ten years. The CPUE for lmb/hour \geq the MLL of 15" was above the 10 year mean at 13.5 lmb/hour for 2015. Condition factors (Wr) for all size ranges of largemouth bass looked satisfactory as well which have been consistent for the past ten years. Spawning success for largemouth bass in 2016 looks poor according to the summer seining samples which were the lowest in the past ten years with a realized CPUE of 0.1 lmb/seine haul.

Smallmouth bass (SMB): Smallmouth bass fishing should be good for the 2017 fishing season. Center Hill offers great SMB habitat with miles of rocky shore line, rocky points and bluff areas, similar to nationally recognized Dale Hollow in preferred SMB habitat. A targeted night time electrofishing survey for SMB was conducted in 2016 at Center Hill. The CPUE's for SMB in 2016 (28.0 smb/hr.) regarding total catch rates were comparable to the 2012 survey of 22.3 smb/hr. and similar to targeted SMB collections at Dale Hollow Reservoir, a bench mark for any SMB fishery. Substock CPUE's were higher in the 2016 SMB data surveys than previous years. Hopefully once the reservoir is back to normal full pool elevations following completion of the dam repairs, favorable spawning conditions will yield even better

year class strengths of SMB which will hopefully recruit to a harvestable size. There were approximately 15,990 SMB fingerlings stocked into Center Hill in 2016.

Spotted bass (SPB): Because Center Hill Reservoir has consistently harbored a good population of spotted bass and continues to do so, anglers in pursuit of these fish will find ample opportunity here for good angling success. Optimum SPB habitat is available at Center Hill (i.e. rocky banks, rocky points, bluffs, etc.) For many years, Center Hill Reservoir was the host of the state record spotted bass of 5lb 8oz. (this record is currently held by a 6lb 1oz spotted bass caught in Chickamauga Reservoir). The mid-summer seining surveys in 2015 were the 3rd highest recorded (9.8 spb/seine haul) in the past ten years but down to a CPUE of 8.1 in 2016. Condition factors (Wrs) for spotted bass look good currently indicating an ample forage base.

Crappie: White crappie make up a small percentage of the overall crappie population in Center Hill Reservoir and are more oriented towards the upper end of the reservoir. Black crappie (including “blacknose” crappie) represent the majority of the crappie present in Center Hill Reservoir. Anglers pursuing crappie should expect to find good numbers of available crappie at Center Hill thanks to an annual stocking program of blacknose crappie (BNC) by TWRA. Low reproductive success occurring on an annual basis led to the initiation of a “blacknose” crappie stocking program here in 1990, the first crappie project of its kind in the state of Tennessee. There were 143,049 blacknose crappie fingerlings stocked into Center Hill in 2016 equaling 7.6 fingerlings/acre. Angler catch rates gathered from an annual roving creel survey in 2016 for “any” crappie at Center Hill in 2016 were 0.81 crappie/hour which is about average over the past ten years. Angling pressure for crappie according to annual roving creel surveys was low comparatively speaking to previous at 0.64 hrs. Expended/acre. The average weight of blacknose crappie harvested in 2016 was 1.16 lbs. and 1.10 lbs. for black crappie. Anglers spent an estimated \$32,480 on trip expenditures in 2016 in pursuit of crappie at Center Hill.

Bluegill: Angler catch rates for bluegill are near the current ten year average. Good bluegill fishing should be anticipated for sunfish anglers on Center Hill Reservoir. CPUE for the 2016 mid-summer seining samples were average at 4.0 bluegill/seine haul.

Walleye: Center Hill Reservoir continues to be a brood source for walleye for several state hatchery facilities. These brood walleye are collected in mid-March in the upper reach of the reservoir in the “blue hole” area near Rock Island via electrofishing. Considerable thought should be given to maintaining adequate stocking regimes to maintain this reliable source of brood walleye. Catch rates (0.06 walleye/hour) for walleye during 2016 were well below the five year average according to roving creel surveys. Walleye continue to be stocked into Center Hill Reservoir on an annual basis. There were 167,330 walleye fingerlings stocked in 2016 (9.2/acre). Based on these facts and limited natural recruitment, walleye anglers should anticipate stable, good fishing for walleye at Center Hill. Expenditures by anglers in pursuit of walleye for 2016 were \$29,050 at Center Hill. The average weight for harvested walleye in 2016 at Center Hill was 2.97 lbs.

Catfish: Catch rates for catfish at Center Hill are stable based on 10 year averages. According to creel surveys \$10,360 was spent on trip expenditures in pursuit of “all” catfish in 2016. Center Hill Reservoir is not known as a top destination for catfish angling when compared to other reservoirs in Region 3, especially those on the Tennessee River. Both channel and flathead catfish were recorded during annual roving creel surveys in 2016 at Center Hill.

Lakewide Angling Summary

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|---------|-----------|---------|---------|------|-----------|---------|------|---------|---------|
| Angling Pressure | | | | | | | | | | |
| Angler Hours | 277,219 | 322,409 | 317,969 | 279,400 | - | 264,973 | 205,427 | - | 171,352 | 143,802 |
| Angler Hours Per Acre | 15.2 | 17.6 | 17.4 | 15.3 | - | 14.6 | 11.4 | - | 9.4 | 7.9 |
| Angler Trips | 52,084 | 58,367 | 58,930 | 48,768 | - | 45,881 | 37,436 | - | 31,542 | 25,194 |
| Value of Fishery (angler expenditures creel) | | | | | | | | | | |
| All Species | 977,450 | 1,446,270 | 995,560 | 916,980 | - | 1,051,260 | 780,460 | - | 808,780 | 467,070 |

Black bass, Center Hill Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|-----------|-------------|----------|-------------|------|-----------|-----------|------|-----------|-----------|
| Angling Pressure | | | | | | | | | | |
| All Black Bass (hrs) | 123,923 | 177,713 | 159,565 | 151,328 | - | 132,966 | 104,049 | - | 98,918 | 101,807 |
| (hrs/acre) | 6.80 | 9.75 | 8.76 | 8.31 | - | 7.30 | 5.71 | - | 5.43 | 5.59 |
| Any Black Bass (hrs) | 115,056 | 160,682 | 149,123 | 131,316 | - | 121,607 | 88,620 | - | 88,248 | 86,650 |
| (hrs/acre) | 6.31 | 8.82 | 8.18 | 7.21 | - | 6.67 | 4.86 | - | 4.84 | 4.76 |
| Largemouth Bass (hrs) | - | - | - | 418 | - | 271 | - | - | 4,581 | 995 |
| (hrs/acre) | - | - | - | 0.02 | - | 0 | - | - | 0 | 0.06 |
| Smallmouth Bass (hrs) | 3,392 | 5,124 | 3,410 | 9,298 | - | 7,475 | 7,923 | - | 4,389 | 7,869 |
| (hrs/acre) | 0.19 | 0.28 | 0.19 | 0.51 | - | 0.41 | 0.44 | - | 0.24 | 0.43 |
| Spotted Bass (hrs) | 5,475 | 11,907 | 7,032 | 10,296 | - | 3,613 | 7,506 | - | 1,700 | 6,293 |
| (hrs/acre) | 0.30 | 0.65 | 0.39 | 0.57 | - | 0.20 | 0.41 | - | 0.09 | 0.35 |
| Tournaments (all black bass) | | | | | | | | | | |
| # Tournaments (BITE) | 1 | - | - | - | - | - | - | - | - | - |
| Pounds/Angler Day (BITE) | 2.7 | - | - | - | - | - | - | - | - | - |
| Bass/Angler Day (BITE) | 1.0 | - | - | - | - | - | - | - | - | - |
| Tournament Angler Hrs/Acre (creel) | - | - | - | - | - | - | - | - | - | - |
| Tournament Catch Rate (creel) | 0.24 | 0.49 | 0.29 | 0.47 | - | 0.45 | 0.33 | - | 0.84 | 0.33 |
| Non-Tournament Catch Rate (creel) | 0.61 | 0.56 | 0.69 | 0.56 | - | 0.52 | 0.52 | - | 0.41 | 0.44 |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| All Black Bass | \$540,650 | \$1,697,830 | 621,280 | \$1,046,670 | - | \$653,830 | \$441,440 | - | \$544,300 | \$343,010 |
| Any Black Bass | \$507,070 | \$1,553,590 | 582,760 | \$922,580 | - | \$596,320 | \$369,440 | - | \$496,070 | \$297,890 |
| Largemouth Bass | - | - | - | \$3,880 | - | \$2,190 | - | - | \$19,420 | \$3,800 |
| Smallmouth Bass | \$8,530 | \$54,990 | \$16,990 | \$59,210 | - | \$46,880 | \$39,010 | - | \$23,070 | \$24,470 |
| Spotted Bass | \$25,050 | \$89,250 | \$21,530 | \$61,000 | - | \$8,440 | \$32,990 | - | \$5,740 | \$16,850 |

Largemouth Bass, Center Hill Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (spring electrofishing) | 0.00 | - | 3.40 | - | 0.20 | - | 1.80 | - | 0.60 | - |
| CPUE (mid-summer seine) | 0.40 | 0.60 | 0.40 | 0.60 | 1.50 | 0.40 | 0.50 | 0.30 | 1.40 | 0.10 |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | 98 | - | 92 | - | 90 | - | 90 | - | 90 | - |
| RSD (preferred) | 85.0 | - | 74.0 | - | 43.0 | - | 68.0 | - | 56 | - |
| CPUE (total) | 12.2 | - | 15.6 | - | 18.0 | - | 20.0 | - | 25.8 | - |
| CPUE > Stock | 12.2 | - | 12.2 | - | 17.8 | - | 18.2 | - | 24.1 | - |
| CPUE ≥ MLL (15-inches) | 10.4 | - | 9.0 | - | 7.6 | - | 15.0 | - | 13.5 | - |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 100.5 | - | 93.1 | - | 125.1 | - | 102.9 | - | 97.6 | - |
| Quality | 96.1 | - | 99.2 | - | 94.9 | - | 102.6 | - | 96.1 | - |
| Preferred | 95.5 | - | 95.6 | - | 95.1 | - | 96.7 | - | 91.3 | - |
| Memorable | - | - | 97.7 | - | 89.5 | - | 91.3 | - | 89.2 | - |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate, num./hr (intended) | N/A | N/A | N/A | 0.00 | - | 0.53 | - | - | 0.13 | 0.09 |
| Catch Rate, num./hr (any black bass) | 0.58 | 0.56 | 0.56 | 0.54 | - | 0.56 | 0.52 | - | 0.55 | 0.44 |
| Harvest Rate, num./hr (any black bass) | 0.22 | 0.19 | 0.19 | 0.16 | - | 0.16 | 0.17 | - | 0.11 | 0.13 |
| % Released | 77.4% | 73.9% | 86.2% | 81.3% | - | 66.6% | 82.6% | - | 84.2% | 72.6% |
| Mean Weight | 2.80 | 2.99 | 3.02 | 3.52 | - | 2.83 | 2.65 | - | 2.78 | 3.02 |

Smallmouth Bass, Center Hill Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-------|-------|-------|-------|------|-------|-------|------|-------|--------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (spring electrofishing) | 0.00 | - | 1.60 | - | - | - | - | - | 0.62 | - |
| CPUE (mid-summer seine) | 0.40 | 1.30 | 0.30 | 0.60 | 0.10 | 0.00 | 0.10 | 0.30 | 1.40 | 0.60 |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | 61 | - | 29 | - | - | - | - | - | 78 | - |
| RSD (preferred) | 30.0 | - | 26.0 | - | - | - | - | - | 20.0 | - |
| CPUE (preferred) | - | - | 1.8 | - | - | - | - | - | 1.0 | - |
| CPUE (total) | 11.2 | - | 8.6 | - | 3.4 | - | 0.6 | - | 8.9 | - |
| CPUE \geq Stock | 11.2 | - | 7.0 | - | - | - | - | - | 8.3 | - |
| CPUE \geq Preferred | - | - | 1.8 | - | - | - | - | - | 1.7 | - |
| CPUE \geq MLL (18-inches) | 2.0 | - | - | - | - | - | - | - | 0.4 | - |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | - | - | 96.2 | - | - | - | - | - | 93.3 | - |
| Quality | - | - | 91.3 | - | - | - | - | - | 85.5 | - |
| Preferred | - | - | 90.5 | - | - | - | - | - | 85.1 | - |
| Memorable | - | - | 80.8 | - | - | - | - | - | 80.4 | - |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | | | | | | | | | | 15,990 |
| #/Acre | | | | | | | | | | 0.88 |
| Fishing success (creel) | | | | | | | | | | |
| Catch Rate, num./hr (intended) | 0.09 | 0.10 | 0.29 | 0.27 | - | 0.30 | 0.40 | - | 0.74 | 0.41 |
| Catch Rate, num./hr (any black bass) | 0.58 | 0.56 | 0.56 | 0.54 | - | 0.56 | 0.52 | - | 0.55 | 0.44 |
| Harvest Rate, num./hr (any black bass) | 0.22 | 0.19 | 0.19 | 0.00 | - | 0.04 | 0.17 | - | 0.11 | 0.13 |
| % Released | 77.4% | 73.9% | 83.6% | 94.1% | - | 92.4% | 87.9% | - | 94.6% | 95.7% |
| Mean Weight | 2.80 | 2.99 | 2.37 | 3.11 | - | 3.48 | 3.22 | - | 3.37 | 2.67 |

Smallmouth Bass (Targeted), Center Hill Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | - | - | - | - | - | 0.00 | - | - | - | 1.76 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | - | - | - | - | - | 87 | - | - | - | 67 |
| RSD (preferred) | - | - | - | - | - | 58.7 | - | - | - | 31.7 |
| CPUE (preferred) | - | - | - | - | - | 1.8 | - | - | - | 2.0 |
| CPUE (total) | - | - | - | - | - | 22.3 | - | - | - | 28.0 |
| CPUE \geq Stock | - | - | - | - | - | 22.3 | - | - | - | 26.2 |
| CPUE \geq Preferred | - | - | - | - | - | 13.1 | - | - | - | 8.3 |
| CPUE \geq MLL (18-inches) | - | - | - | - | - | 2.8 | - | - | - | 0.5 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | 87.2 | - | - | - | 84.0 |
| Quality | - | - | - | - | - | 85.7 | - | - | - | 85.0 |
| Preferred | - | - | - | - | - | 88.0 | - | - | - | 71.8 |
| Memorable | - | - | - | - | - | 79.8 | - | - | - | 81.9 |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |

Spotted Bass, Center Hill Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (spring electrofishing) | 2.2 | - | 7.6 | - | 2.8 | - | 0.6 | - | 2.3 | - |
| CPUE (mid-summer seine) | 7.8 | 4.1 | 1.1 | 6.3 | 6.6 | 0.4 | 21.4 | 7.6 | 9.8 | 8.1 |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | 63.0 | - | 41.0 | - | 63.0 | - | 56.0 | - | 58.6 | - |
| RSD (preferred) | 18.0 | - | 12.0 | - | 24.0 | - | 16.0 | - | 8.6 | - |
| CPUE (total) | 37.0 | - | 59.0 | - | 35.0 | - | 11.0 | - | 43.5 | - |
| CPUE \geq Stock | 29.2 | - | 51.4 | - | 32.2 | - | 10.6 | - | 41.2 | - |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 109.5 | - | 107.6 | - | 116.8 | - | 114.5 | - | 105.7 | - |
| Quality | 102.7 | - | 105.0 | - | 105.1 | - | 111.5 | - | 98.0 | - |
| Preferred | 101.7 | - | 103.7 | - | 103.4 | - | 98.4 | - | 91.3 | - |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate, num./hr (intended) | 0.53 | 0.87 | 0.95 | 0.76 | - | 0.48 | 0.70 | - | 0.08 | 0.74 |
| Catch Rate, num./hr (any black bass) | 0.58 | 0.56 | 0.56 | 0.54 | - | 0.56 | 0.52 | - | 0.55 | 0.44 |
| Harvest Rate, num./hr (any black bass) | 0.22 | 0.19 | 0.19 | 0.45 | - | 0.29 | 0.17 | - | 0.11 | 0.13 |
| % Released | 77.4% | 73.9% | 60.0% | 62.2% | - | 56.4% | 54.8% | - | 70.2% | 59.6% |
| Mean Weight | 2.80 | 2.99 | 1.52 | 1.49 | - | 1.23 | 1.63 | - | 1.56 | 1.54 |

Black Crappie, Center Hill Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013* | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|-----------|-----------|----------|------|----------|----------|------|----------|----------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | - | - | - | - | - | - | - | - | - | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | - | - | - | - | - | - | 92 | - | - | - |
| RSD (preferred) | - | - | - | - | - | - | 56 | - | - | - |
| CPUE (total) | - | - | - | - | 0.2 | - | 7.4 | - | - | - |
| CPUE \geq Stock | - | - | - | - | - | - | 7.4 | - | - | - |
| CPUE \geq MLL (10-inches) | - | - | - | - | - | - | 3.5 | - | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | 109.5 | - | - | - |
| Quality | - | - | - | - | - | - | 115.4 | - | - | - |
| Preferred | - | - | - | - | - | - | 107.0 | - | - | - |
| Memorable | - | - | - | - | - | - | 109.0 | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 40,376 | 40,187 | 32,473 | 28,806 | - | 21,501 | 13,060 | - | 13,324 | 11,691 |
| Angler Hours/Acre | 2.22 | 2.21 | 1.78 | 1.58 | - | 1.18 | 0.72 | - | 0.73 | 0.64 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 1.67 | 0.96 | 1.50 | 1.49 | - | 0.83 | 0.98 | - | 0.24 | 0.81 |
| Harvest Rate (any crappie) | 0.59 | 0.40 | 0.41 | 0.63 | - | 0.29 | 0.40 | - | 0.12 | 0.44 |
| % Released (black crappie) | 40.8% | 0.0% | 75.2% | 38.5% | - | 41.2% | 60.5% | - | 73.9% | 21.9% |
| Mean Weight (black crappie) | 1.19 | 1.55 | 1.27 | 1.29 | - | 1.10 | 0.92 | - | 1.00 | 1.10 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | \$200,570 | \$172,330 | \$123,990 | \$97,960 | - | \$53,820 | \$48,920 | - | \$40,120 | \$32,480 |

*Targeted Sample

Blacknose Crappie, Center Hill Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013* | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|-----------|-----------|----------|---------|----------|----------|---------|----------|----------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | - | - | - | - | - | - | 0.00 | - | - | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | - | - | - | - | - | - | 97.0 | - | - | - |
| RSD (preferred) | - | - | - | - | - | - | 44.0 | - | - | - |
| CPUE (total) | - | - | - | - | 3.2 | - | 26.2 | - | - | - |
| CPUE ≥ Stock | - | - | - | - | - | - | 26.2 | - | - | - |
| CPUE ≥ MLL (10-inches) | - | - | - | - | - | - | 9.7 | - | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | 99.5 | - | - | - |
| Quality | - | - | - | - | - | - | 116.2 | - | - | - |
| Preferred | - | - | - | - | - | - | 119.1 | - | - | - |
| Memorable | - | - | - | - | - | - | 103.6 | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | 212,344 | 81,894 | 254,538 | 120,574 | 174,255 | 129,010 | 118,954 | 114,960 | 129,984 | 143,049 |
| #/Acre | 11.7 | 4.5 | 14.0 | 6.6 | 9.6 | 7.1 | 6.5 | 6.3 | 7.1 | 7.6 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 40,376 | 40,187 | 32,473 | 28,806 | - | 21,501 | 13,060 | - | 13,324 | 11,691 |
| Angler Hours/Acre | 2.22 | 2.21 | 1.78 | 1.58 | - | 1.18 | 0.72 | - | 0.73 | 0.64 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 1.67 | 0.96 | 1.50 | 1.49 | - | 0.83 | 0.98 | - | 0.24 | 0.81 |
| Harvest Rate (any crappie) | 0.59 | 0.40 | 0.41 | 0.63 | - | 0.29 | 0.40 | - | 0.12 | 0.44 |
| % Released (blacknose crappie) | 68.9% | 64.8% | 74.9% | 57.7% | - | 72.4% | 58.9% | - | 64.9% | 46.5% |
| Mean Weight (blacknose crappie) | 1.73 | 1.21 | 1.26 | 1.18 | - | 1.25 | 1.00 | - | 1.06 | 1.16 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | \$200,570 | \$172,330 | \$123,990 | \$97,960 | - | \$53,820 | \$48,920 | - | \$40,120 | \$32,480 |

*Targeted Sample

White Crappie, Center Hill Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013* | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|-----------|-----------|----------|------|----------|----------|------|----------|----------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | - | - | - | - | - | - | - | - | - | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | - | - | - | - | - | - | - | - | - | - |
| RSD (preferred) | - | - | - | - | - | - | - | - | - | - |
| CPUE (total) | - | - | - | - | - | - | 1.7 | - | - | - |
| CPUE ≥ Stock | - | - | - | - | - | - | - | - | - | - |
| CPUE ≥ MLL (10-inches) | - | - | - | - | - | - | - | - | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | - | - | - | - | - | - | - |
| Preferred | - | - | - | - | - | - | - | - | - | - |
| Memorable | - | - | - | - | - | - | - | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 40,376 | 40,187 | 32,473 | 28,806 | - | 21,501 | 13,060 | - | 13,324 | 11,691 |
| Angler Hours/Acre | 2.22 | 2.21 | 1.78 | 1.58 | - | 1.18 | 0.72 | - | 0.73 | 0.64 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 1.67 | 0.96 | 1.50 | 1.49 | - | 0.83 | 0.98 | - | 0.24 | 0.81 |
| Harvest Rate (any crappie) | 0.59 | 0.40 | 0.41 | 0.63 | - | 0.29 | 0.40 | - | 0.12 | 0.44 |
| % Released (w hite crappie) | 48.3% | 38.6% | 75.9% | 0.0% | - | 0.0% | 0.0% | - | 0.0% | - |
| Mean Weight (w hite crappie) | 0.91 | 0.83 | 0.99 | 0.80 | - | 1.53 | 1.00 | - | 0.70 | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | \$200,570 | \$172,330 | \$123,990 | \$97,960 | - | \$53,820 | \$48,920 | - | \$40,120 | \$32,480 |

*Targeted Sample

Walleye, Center Hill Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|-----------|-----------|-----------|---------|-----------|-----------|---------|-----------|----------|
| Recruitment (gill netting) | | | | | | | | | | |
| Substock CPUE (gill netting) | - | - | - | - | 0.0 | - | - | - | - | - |
| CPUE (mid-summer seine) | 0.8 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | - | 0.4 |
| Density (gill netting) | | | | | | | | | | |
| PSD | - | - | - | - | 100.0 | - | - | - | - | - |
| RSD (preferred) | - | - | - | - | 7.0 | - | - | - | - | - |
| CPUE (total) | - | - | - | - | 1.4 | - | - | - | - | - |
| CPUE ≥ Stock | - | - | - | - | 1.4 | - | - | - | - | - |
| CPUE ≥ MLL (15-inches) | - | - | - | - | 1.4 | - | - | - | - | - |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | 488.0 | - | - | - | - | - |
| Condition (gill netting) | | | | | | | | | | |
| Stock | - | - | - | - | 106.9 | - | - | - | - | - |
| Quality | - | - | - | - | 105.8 | - | - | - | - | - |
| Preferred | - | - | - | - | 102.3 | - | - | - | - | - |
| Memorable | - | - | - | - | 101.4 | - | - | - | - | - |
| Mortality (gill netting) | | | | | | | | | | |
| Total Mortality | - | - | - | - | 42.0% | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | 282,696 | 243,454 | 304,967 | 123,322 | 224,398 | 137,459 | 85,279 | 242,276 | 182,666 | 167,330 |
| #/Acre | 15.5 | 13.4 | 16.7 | 6.8 | 12.3 | 7.5 | 4.7 | 13.3 | 10.0 | 9.2 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | 47,563 | 56,375 | 63,344 | 56,935 | - | 53,846 | 37,116 | - | 32,212 | 11,291 |
| Angler Hours/Acre | 2.61 | 3.09 | 3.48 | 3.12 | - | 2.96 | 2.04 | - | 1.77 | 0.62 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0.16 | 0.21 | 0.30 | 0.42 | - | 0.17 | 0.21 | - | 0.17 | 0.06 |
| Harvest Rate (intended) | 0.09 | 0.06 | 0.12 | 0.14 | - | 0.10 | 0.12 | - | 0.13 | 0.04 |
| % Released | 48.1% | 67.2% | 64.6% | 70.5% | - | 56.7% | 45.9% | - | 27.2% | 29.6% |
| Mean Weight | 2.90 | 2.94 | 2.42 | 2.60 | - | 2.73 | 3.10 | - | 2.44 | 2.97 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Walleye | \$254,360 | \$278,020 | \$313,330 | \$240,640 | - | \$178,360 | \$115,970 | - | \$111,260 | \$29,050 |

Sunfish, Center Hill Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|----------|----------|----------|----------|------|----------|-----------|------|----------|----------|
| Recruitment | | | | | | | | | | |
| Bluegill CPUE (mid-summer seine) | 1.10 | 1.30 | 3.30 | 6.90 | 3.90 | 1.50 | 0.90 | 5.40 | 3.00 | 4.00 |
| Redear CPUE (mid-summer seine) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all sunfish) | 14,652 | 7,019 | 14,514 | 21,622 | - | 17,499 | 27,146 | - | 9,769 | 5,710 |
| Angler Hours/Acre | 0.80 | 0.39 | 0.80 | 1.19 | - | 0.96 | 1.49 | - | 0.54 | 0.31 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any sunfish) | 6.97 | 1.95 | 3.75 | 3.60 | - | 2.69 | 1.70 | - | 4.14 | 4.23 |
| Harvest Rate (any sunfish) | 4.56 | 1.29 | 2.05 | 2.42 | - | 1.80 | 1.14 | - | 2.69 | 2.86 |
| % Released (bluegill) | 38.7% | 40.9% | 46.8% | 37.4% | - | 33.9% | 40.5% | - | 31.6% | 25.1% |
| Mean Weight (bluegill) | 0.26 | 0.30 | 0.40 | 0.41 | - | 0.40 | 0.43 | - | 0.37 | 0.39 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Sunfish | \$40,630 | \$16,890 | \$65,570 | \$84,750 | - | \$61,190 | \$112,420 | - | \$50,580 | \$32,980 |

Catfish, Center Hill Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|----------|----------|----------|----------|------|----------|----------|------|----------|----------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all catfish) | 9,376 | 6,342 | 5,550 | 7,882 | - | 13,801 | 13,239 | - | 8,248 | 6,055 |
| Angler Hours/Acre | 0.51 | 0.35 | 0.30 | 0.43 | - | 0.76 | 0.73 | - | 0.45 | 0.33 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any catfish) | 0.37 | 0.22 | 0.21 | 0.32 | - | 0.13 | 0.32 | - | 0.25 | 0.23 |
| Harvest Rate (any catfish) | 0.37 | 0.22 | 0.21 | 0.32 | - | 0.13 | 0.29 | - | 0.25 | 0.23 |
| % Released (channel) | 6.7% | 24.6% | 11.0% | 8.1% | - | 12.4% | 25.5% | - | 2.1% | 0.0% |
| Mean Weight (channel) | 3.14 | 2.78 | 3.64 | 4.12 | - | 3.62 | 3.14 | - | 3.74 | 3.45 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Catfish | \$27,410 | \$21,010 | \$25,410 | \$35,580 | - | \$26,950 | \$40,700 | - | \$22,720 | \$10,360 |

Shad, Center Hill Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------|-------|------|------|------|------|------|------|------|------|------|
| Density (electrofishing) | | | | | | | | | | |
| Alewife CPUE | - | - | - | - | - | - | - | - | - | - |
| Gizzard CPUE | 128.0 | - | - | - | - | - | - | - | - | - |
| Threadfin CPUE | 518.9 | - | - | - | - | - | - | - | - | - |

Habitat Enhancement, Center Hill Reservoir

| Type of Work | Details | Quantity | |
|-----------------|--------------------|--------------|-----------|
| | | New | Renovated |
| Fish Attractors | Brushed with trees | 16 new sites | 0 |

Water Quality Monitoring, Center Hill Reservoir

| Parameter | Sampling Period | Water Quality |
|------------------|-----------------|----------------|
| Temperature | none performed | none performed |
| Dissolved Oxygen | | |
| PH | | |
| Conductivity | | |

Center Hill Angler Attitude Surveys (2016)

Fish management has been described in scientific literature as the management of three vital entities; organisms, habitat and people, all of which are inner linked. Biologists are continually evaluating this trilogy in efforts to better manage specified aquatic resources and thus offer sound management recommendations. For example, the Region 3 Reservoir crew monitors fish populations through such methods as electrofishing, netting, creel surveys, seining, etc. Additionally, we currently have a five year strategic habitat plan which addresses reservoir habitat needs and solutions achieved by various habitat projects. Creel surveys, public meetings, sport fishing comment periods, etc. all aim at obtaining input from the public, whole or in part. These data surveys and projects are vital to the overall management of the aquatic resources within the reservoirs.

Public input can be a very useful tool for biologists in the overall management of a reservoir by defining areas of concern or approval. In an effort to accomplish this, we decided to use our annual roving creel program to be the vehicle to conduct a yearlong angler attitude survey starting in the year 2013. There was no realized added expense with this survey with only an increase of interview time (2-5 minutes). Anglers were asked a series of questions in addition to routine, state-wide standardized creel questions. Typical creel data will gather such useful data as angling pressure, expenditures, harvest rates, species composition, catch rates, avg. size of caught fish, socioeconomics, etc. The goal of the angler attitude survey was to achieve just what the name implies and would be gathered from actual anglers fishing specified reservoirs rather than general anglers with unspecified destinations or past recollections of trips gone by. Similar statewide surveys have been conducted by University of Tennessee (UT) in the past for TWRA but have been more general and broader in scope with no emphasis placed on a specific reservoir. Often times, minority user groups succeed in representing the sentiment of the angling public when actually it is not the overall view of an unbiased assessment of multiple anglers. The results of the angler attitude survey have already proven to be very informative. Future reservoir management decisions will benefit from this type of pertinent insight from anglers.

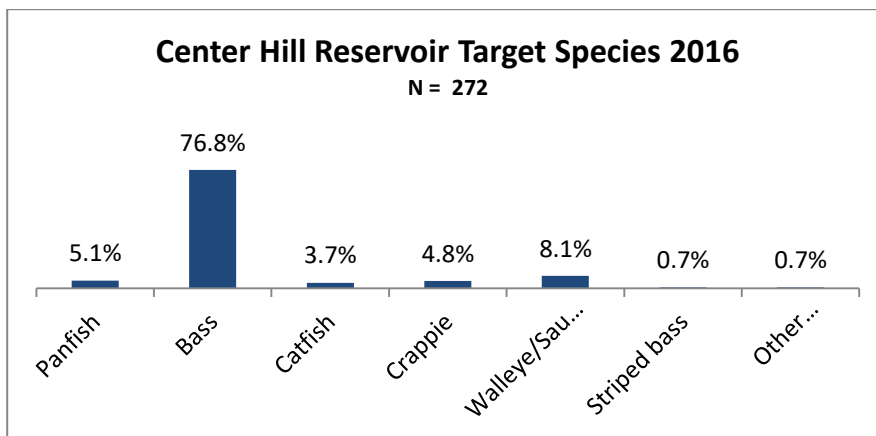
We sampled our angling public with attitude surveys again in 2016 on the four reservoirs in Region 3 that creel surveys were conducted (Center Hill, Chickamauga, Dale Hollow, and Watts Bar Reservoirs). Overall “approval” of Region 3 reservoirs in this 2016 survey is very favorable at the current time according to these 2016 surveys. We feel confident that this summary of our “angler attitudes” will once again provide insight to how these particular reservoirs are evaluated by our angling public. This type information coupled with our biological data should prove to be a good balance when we move forward with management decisions regarding reservoirs in Region 3 as warranted.

This project and overall fish management would not be possible without the dedication of the Region 3 creel clerks (Danny Stone, Tim Poole) and the Region 3 reservoir fisheries crew.

Results from the Angler Attitude Survey for Center Hill are as follows:

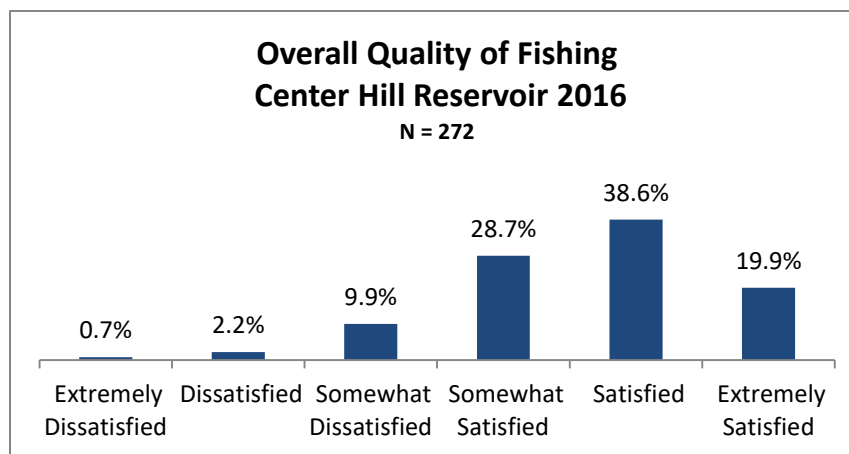
There were a total of 272 anglers who were fishing at Center Hill Reservoir interviewed by a creel clerk for the angler attitude survey in 2016. This was a roving creel survey performed via boat and this angler attitude survey was collected in conjunction with standardized creel surveys and in accordance with statewide protocol.

As the graph below indicates, the most targeted species of fish by anglers on Center Hill was “bass” (76.8%) with walleye being a distant second (8.1%).

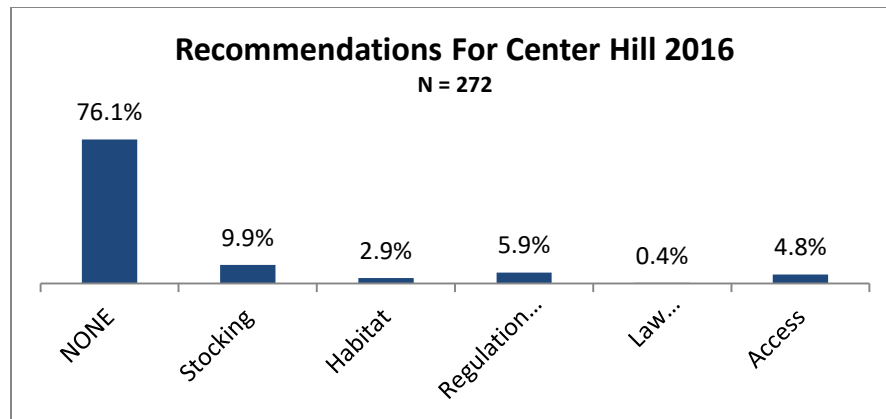


These surveys also revealed that fishermen who identified “Bass” (n=209) as their primary target species, 50.5% of those also fished bass tournaments. On average, these bass tournament fishermen at Center Hill Reservoir fished an average of 12.4 bass tournaments/year.

As the graph below depicts anglers expressed a high satisfaction rating (87.2%) overall when asked about the “overall quality of fishing on Center Hill Reservoir”.



According to the graph below, when anglers who fish Center Hill were asked if they had any recommendations for the overall management of Center Hill Reservoir the majority (76.1%) had “NONE” indicating that TWRA’s management of the fisheries at Center Hill was agreeable. Concerns over stocking of various species were of greatest concern (9.9% of interviewed anglers). Currently, TWRA stocks walleye, smallmouth bass, and blacknose crappie into Center Hill Reservoir.



Overall, according to our 2016 annual creel interviews, the angler attitudes for those fishing at Center Hill are ones that exhibit a high approval for the current fish management of this reservoir by TWRA.

Chickamauga Reservoir (2016 Annual Report)

Description

Area (acres): 35,400**Mean Depth (feet):****Shoreline (miles):** 810**Counties:** Rhea, Meigs, Bradley, and Polk**Total Fishing Effort (angler hours):** 493,262**Total Value by Anglers:** \$2,739,510

Summary:

Chickamauga Reservoir was impounded in 1940 by the Tennessee Valley Authority (TVA) which created a 35,400 acre reservoir with 810 miles of shoreline. Chickamauga Reservoir lies within Rhea, Meigs, Bradley, and Polk counties. Major cities adjacent to Chickamauga Reservoir would include Dayton (mid-reservoir section) and Chattanooga, TN (lower end of reservoir).

Largemouth bass (LMB): Spring electrofishing surveys were conducted for black bass in Chickamauga in 2016. These surveys are typically conducted on alternate years, thus an electrofishing survey was not conducted during the spring of 2015. An annual roving creel survey was also conducted on Chickamauga in 2016.

Fishing for largemouth bass in Chickamauga Reservoir has a very good outlook currently. Positive influences affecting the largemouth bass fishery on Chickamauga Reservoir at the present time are increased aquatic vegetation, Florida Largemouth bass (FLMB) stocking program, ample forage base, and good natural recruitment. A FLMB stocking project was started in the year 2000 by TWRA and FLMB fingerlings have been stocked annually since except for the year 2011 due to the unavailability of FLMB fry for TWRA hatcheries. A total of 53,380 FLMB fingerlings were stocked in 2016 into Chickamauga. A reduced number were stocked in 2016 due to the demand for FLMB fingerlings in neighboring reservoirs (Watts Bar and Nickajack) where a FLMB stocking project was launched in 2015. Approximately 3 million FLMB fingerlings have been stocked into Chickamauga since the onset of the project. Genetic analyses continue to be conducted to aid in evaluating the success of this project although original project goals (15% Florida genes present in the LMB genome) were realized and surpassed by the year 2010. Genetic tests have confirmed that F1 hybrids (FLMB x "Native"-pre stocked LMB) exhibit the greatest growth potential thus far. Backcrosses also express greater growth rates than those of the pre-stocked population in Chickamauga Reservoir. Pure FLMB however have been minimally represented in all surveys conducted and thus noncontributory overall to the success of this project on an individual basis.

Electrofishing surveys have shown an increase in abundance of largemouth bass ≥ 15 inches, especially over the course of the FLMB stocking project which began in the year 2000. The current LMB regulation at Chickamauga is a 5 fish daily creel limit, 15" minimum length limit (MLL). Age and growth studies conducted in 2014 showed that on average a 3 year old LMB from Chickamauga was 334 mm (13.15 inches) in length based on otolith calculations. Condition factors (Wrs) for LMB collected over the past 8 years were satisfactory in all size classes. Creel surveys showed angling pressure for black bass on Chickamauga to be near the ten year high at 7.90 hours/acre in 2016. Creel surveys have shown that the average size of LMB caught have more than doubled over the course of the FLMB project. The average weight for a harvested LMB according to the 2016 roving creel survey at Chickamauga was 4.15 lbs., the highest in the past ten years and beyond. The average weight for creel LMB in the year 2000, the launch of the FLMB stocking program, was 1.42 lbs. Hopefully, the benefiting factors (aquatic vegetation, growth rates, forage availability, etc.) that are currently present on Chickamauga Reservoir will remain

and continue to be conducive to providing a premier largemouth bass fishery. The results from summer seining surveys conducted on Chickamauga in 2016 yielded partial confirmation towards a good spawn with a CPUE of 3.40 lmb/seine haul which is about average when compared over the past ten years. Long term evaluations (electrofishing, creel, tournament results, genetic testing) of this LMB population will be necessary to fully realize and understand the implications of this FLMB stocking program.

On February 13, 2015 the 60 year plus largemouth bass record (14.5 lbs., 1954) in Tennessee was broken by an early morning catch at Chickamauga Reservoir. The new record largemouth bass weighing 15 lbs., 3oz. was caught by angler Gabe Keen. The fish was given extensive review by the Region 3 Reservoir Crew and certified the following day. Genetic tests performed later confirmed that this was a 12 year old fish which was an F1 hybrid (Native LMB X FLMB). There has been much attention and excitement garnished around this fish further promoting the LMB fishery on a national level at Chickamauga.

Smallmouth bass (SMB): The population size of smallmouth bass at Chickamauga Reservoir has remained stable and probably could be argued that it has increased within the last several years. The upper headwaters and lower end provide the best smallmouth bass habitat and therefore host the greatest numbers of SMB in this reservoir. Targeted night time electrofishing samples have been conducted on Chickamauga Reservoir to evaluate this population in the years 2008, 2010 and 2014. CPUE for smallmouth bass for these surveys averaged 20.8 smb/hour which is similar among all 3 years. PSD figures are near the top of the desirable range (70) for all 3 years. Smallmouth bass were represented in the mid-summer seining surveys at 1.0 SMB/net haul, the second highest CPUE in the past ten consecutive years of these collections. These seining surveys are conducted reservoir wide. Continued targeted electrofishing surveys in the future will be critical to the evaluation of SMB at Chickamauga. The current regulation of an 18" MLL and 1 SMB/day will ensure that ample opportunity is given to smallmouth bass to excel if the right conditions exist while also protecting a limited population that is likely to be influenced by invasive Alabama bass currently and in the future. Alabama bass presence has been confirmed in the upper reaches of the reservoir (Ocoee River). See more about Alabama bass in Chickamauga in the spotted bass narrative below.

Spotted bass (SPB): Over the last ten years the average catch rate for SPB in electrofishing surveys on Chickamauga Reservoir have been relatively low. This has also been the case for neighboring reservoirs within the TN River system. One possible explanation for this decline could be from a change in water levels due to TVA's Reservoir Operations Study (ROS) instituted in 2008 which delays the summertime fill to May 15 instead of the traditional April 15. This ROS plan has potentially compromised spawning success for spotted bass by preferred habitat not being available in time for nesting. Another current real threat to the native spotted bass populations in Chickamauga Reservoir are the realization of Alabama bass in the upper reaches of the reservoir in the Ocoee River upstream to Parksville Dam. Alabama bass have the potential to out compete native spotted and smallmouth bass as well as hybridize with these species. During spring electrofishing surveys in 2001, Alabama bass were first documented in Tennessee at Parksville Reservoir, which is located upstream of Chickamauga Reservoir on the Ocoee River. A 6lb. 7 oz. Alabama bass, as confirmed by genetics, was caught on July 30, 2010 in the upper reaches of Chickamauga Reservoir. The location of this catch was in the Ocoee River below Parksville Dam.

The overall CPUE for SPB from Chickamauga via spring electrofishing in 2010 was 2 spb/hour, 4.4 spb/hour in 2012, 4.9 spb/hour in 2014, and 4.0 spb/hour in 2016. Additionally, CPUE for YOY fish from 2008 – 2014 mid-summer seining samples were below average and have exhibited a downward trend over the past decade. In 2016 the CPUE for summer seining surveys was 1.40 spb/seine haul, the

second highest in the past ten years. However, caution should be given to this sample by realizing the possibility that some of these “spotted bass” collected in this seining survey may be Alabama bass or at least have their influence. There should still be fair opportunity in regards to angling for SPB at Chickamauga Reservoir, especially in the more riverine sections of the river.

The current spotted bass record for the state of TN came from Chickamauga Reservoir on February 22, 2011. This fish weighed 6lbs. 1oz. and the identity as a native northern spotted bass was confirmed by genetic tests to rule out any influence of Alabama bass genetics. The spotted bass record was held from another Region 3 reservoir, Center Hill, for many years prior to this catch.

Crappie (black and white): Angling for crappie on Chickamauga Reservoir has been very productive for the past several years. Crappie fishing success at Chickamauga has been ranked nationally by media sources as a top destination for crappie fishing over the past several years. Crappie tournaments have also frequented Chickamauga. Currently, catch rates by anglers are above the ten year average. Trapnetting continues to be an excellent predictor of year class strength for mainstem reservoirs along the TN River. Fall trapnetting surveys conducted in 2016 on Chickamauga Reservoir show that black crappie (BC) exhibited high catch rates (7.90 BC/net night) when compared to the past 10 years. It is important to point out that the majority (>75%) of the BC collected in these trapnetting surveys came from Mud Creek. White crappie (WC) numbers from the same data survey were realized at a catch rate of 0.72 WC/net night. Black crappie makes up the majority of the total crappie harvest at Chickamauga according to creel surveys. In 2016 creel surveys concluded that an estimated \$138,670 dollars (trip expenditures) was expended in pursuit of both black and white crappie at Chickamauga. These same creel surveys recorded a catch rate of 2.48 crappie/hour with an average weight of 0.78 lbs. for black crappie and 0.76 lbs. for white crappie. Angling pressure recorded for fishermen fishing for crappie at Chickamauga was down slightly (1.56 hrs. /acre) in 2016 from the previous year (1.83 hrs.) /acre).

Sunfish (bluegill and redear): Anglers pursuing “panfish” such as redear sunfish and bluegill will find great opportunities at Chickamauga Reservoir. Redear sunfish regulations currently at Chickamauga are a creel limit of 20 redear/day with no minimum length limit (MLL). Bluegill have no creel or MLL restrictions. Because Chickamauga Reservoir is so conducive to various sunfish species there are good expectations of sustainability and angling success. Catch rates for “panfish” (mainly bluegill and redear) at Chickamauga in 2016 were at 7.20 fish/hour according to the annual roving creel survey, up slightly from the previous year (6.64 sunfish/hour). Bluegill were well represented in the 2016 mid-summer seining surveys with a catch rate of 12.5 bluegill/seine haul. Redear were observed at a rate of 2.0 redear/seine haul from these same surveys. Bluegill and redear sunfish were both well represented and recorded (See “bluegill” and “redeer” table below) from the fall trapnetting surveys conducted to evaluate the 2016 crappie spawning success. Full reservoir levels at Chickamauga Reservoir aren’t realized until May 15 which prior to the implementation of TVA’s ROS plan in 2008 was April 15. These one month delays in achieving summer time pool levels have not allowed redear sunfish to utilize historical, preferred spawning sites. During spring black bass electrofishing surveys, we have observed many historic redear sunfish spawning sites that are not being used because ample water was not available in time for nesting preparations. Redear sunfish and bluegill will continue to be a target for consumptive and sport anglers at Chickamauga Reservoir and consistent angling opportunities are expected.

Sauger: Sauger populations can vary considerably due to required flow requirements during spawning times and other critical factors affecting spawning success. Sauger, often called TN’s “mystery fish” have been one of the most researched fish species in Tennessee by both TWRA and university studies yet it remains one of the most difficult fish to manage for a variety of reasons, many unknown. The state

hatcheries have not had consistent success in propagating this fish and often times sauger present difficulties in collecting the brood fish. In the past there have been annual stockings of sauger fingerlings to help augment the populations in the TN River impoundments in Region 3 including Chickamauga Reservoir as well as neighboring reservoirs. These stockings have not always been realized every year due to various difficulties realized in the hatchery process. According to creel surveys conducted in 2016 at Chickamauga Reservoir, catch rates by anglers fishing for sauger were non-existent. The catch rate in 2015 was 0.58 sauger/hour which was up from 0.02 sauger/hour in 2014. The average weight for a harvested sauger in 2015 was 1.44 lbs. which is consistent with averages over the past ten years. Fishing success for sauger can be hard to predict because of all the variables (i.e. weather, water flows, access) affecting this fishery during the winter and pre-spring months when sauger are most vulnerable to angling. In 2014 on Chickamauga Reservoir there was a shift to stocking walleye instead of sauger due to hatchery limitations with sauger and the realized benefits of walleye over sauger from an angling perspective (walleye get bigger, live longer and offer more of a year around fishery). The pilot TN River walleye stocking project was instituted in neighboring upriver reservoir, Watts Bar, in 2011. Like sauger, walleye are native to the TN River which flows through Chickamauga Reservoir. Confirmed reports of walleye catches at Chickamauga have been on the increase and are expected to continue with current regular annual stockings of walleye. A walleye stocking program upstream in Watts Bar Reservoir has no doubt contributed to walleye in the upper reaches of Chickamauga Reservoir as well through dam passage. Sauger densities on the other hand are expected to remain low overall with the sole dependency now being with their natural spawning success which is not consistent. It is important to note that no complaints have been received by those who identify themselves as sauger fishermen in regards to the change of stocking walleye over sauger. Actually, much praise and excitement has developed and sustained around the new walleye stocking project.

Catfish: Chickamauga Reservoir continues to be a prime target for those anglers in pursuit of catfish, both sport and commercially. Fishing for catfish at Chickamauga is typically the second or third most sought after game fish as compared within this reservoir. There are three species of catfish targeted by anglers at Chickamauga; blue, channel, and flathead catfish. Roving creel surveys are the main source of data used to evaluate this fishery. The estimated trip expenditures spent by anglers in pursuit of catfish in 2016 were \$121,790. These same anglers expended the lowest effort in hours over the past ten years in pursuit of catfish at an estimated 1.48 hours/acre. All available information points toward a very productive catfish fishery in the future at Chickamauga Reservoir. Trends observed from harvest data collected by annual roving creel surveys show an overall increase in blue catfish harvest and an overall decrease in channel catfish harvest on Chickamauga. Much effort is invested annually by commercial fishermen and anglers in pursuit of catfish in Chickamauga. Currently there is a catfish study being conducted by Tennessee Tech University (TTU) that will hopefully answer some questions regarding catfish populations within Chickamauga Reservoir. Several reports of trophy blue catfish continue to be forth coming from catfish anglers who fish Chickamauga in the pursuit thereof.

Striped bass: Anglers spent an estimated \$53,340 in 2016 while pursuing striped bass in Chickamauga Reservoir. This is mainly a tailwater fishery at the headwaters of Chickamauga below Watts Bar Dam although there is also successful fishing for striped bass realized in the upper reaches of the Hiwassee River, a tributary to Chickamauga Reservoir. In 2016 there were 100,013 striped bass fingerlings stocked into Chickamauga Reservoir. Stockings of striped bass into Chickamauga have not always occurred in the past due to fear of interactions with commercial entanglement gear and also the availability of these fingerlings. Striped bass stocked in neighboring Watts Bar Reservoir annually do find their way to Chickamauga through dam passage via Watts Bar dam locks. Striped bass congregate in the Watts Bar tailwaters (Chickamauga headwaters) during various times of the year especially in spring and fall. An abundant forage base of gizzard and threadfin shad are some of the biggest reasons for this assemblage.

Skipjack herring also represent a preferred forage base at Chickamauga for striped bass although populations are cyclic. Mean weight of harvested striped bass in 2016 was 16.87 lbs. The average catch rate was 0.63 striped bass/hour. Good fishing for striped bass is expected to remain consistent in Chickamauga Reservoir, mainly in the headwaters and upper navigable reaches of the Hiwassee River where striped bass seek out thermal refuges and abundant forage in hot summer months.

Black Bass

| Angling Pressure | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|-----------|-------------|-------------|-------------|-------------|-----------|------|-------------|-----------|-----------|
| All Black Bass (hrs) | 231,148 | 200,330 | 190,311 | 274,393 | 273,526 | 255,190 | - | 258,519 | 262,403 | 279,631 |
| (hrs/acre) | 6.53 | 5.66 | 5.38 | 7.75 | 7.73 | 7.21 | - | 7.30 | 7.41 | 7.90 |
| Any Black Bass (hrs) | 231,023 | 200,330 | 190,073 | 273,195 | 272,540 | 255,190 | - | 258,519 | 262,403 | 279,631 |
| (hrs/acre) | 6.53 | 6.53 | 5.37 | 7.72 | 7.70 | 7.21 | - | 7.30 | 7.41 | 7.90 |
| Largemouth Bass (hrs) | - | - | 238 | 1,198 | 986 | - | - | 2,503 | 11,985 | - |
| (hrs/acre) | - | - | 0.01 | 0.03 | 0.03 | - | - | 0.07 | 0.34 | - |
| Smallmouth Bass (hrs) | 125 | - | - | - | - | - | - | - | - | - |
| (hrs/acre) | 0.00 | - | - | - | - | - | - | - | - | - |
| Spotted Bass (hrs) | - | - | - | - | - | - | - | - | - | - |
| (hrs/acre) | - | - | - | - | - | - | - | - | - | - |
| Tournaments (all black bass) | | | | | | | | | | |
| # Tournaments (BITE) | 7 | | | | | | | - | | - |
| Pounds/Angler Day (BITE) | 3.4 | | | | | | | - | | - |
| Bass/Angler Day (BITE) | 1.6 | | | | | | | - | | - |
| Tournament Angler Hrs/Acre (creel) | | | | | | | | - | | - |
| Tournament Catch Rate (creel) | 1.28 | 1.34 | 1.73 | 1.83 | 1.10 | 1.14 | - | 1.01 | 0.72 | 0.42 |
| Non-Tournament Catch Rate (creel) | 1.05 | 1.22 | 1.08 | 0.92 | 0.72 | 0.83 | - | 0.60 | 0.83 | 0.68 |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| All Black Bass | \$900,470 | \$1,673,470 | \$1,562,860 | \$1,837,830 | \$2,202,360 | \$910,800 | - | \$1,445,980 | \$959,340 | \$857,960 |
| Any Black Bass | \$900,160 | \$1,673,470 | \$1,562,860 | \$1,825,150 | \$2,188,450 | \$910,800 | - | \$1,445,980 | \$959,340 | \$857,960 |
| Largemouth Bass | - | - | - | \$12,680 | \$13,910 | - | - | \$14,770 | \$43,890 | - |
| Smallmouth Bass | \$310 | - | - | - | - | - | - | - | - | - |
| Spotted Bass | - | - | - | - | - | - | - | - | - | - |

Largemouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|---------|--------|---------|---------|-------|---------|---------|--------|---------|--------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (spring electrofishing) | - | 17.20 | - | 3.63 | - | 4.50 | - | 2.99 | - | 8.38 |
| CPUE (mid-summer seine) | 1.60 | 0.50 | 4.60 | 5.30 | 1.80 | 2.00 | 3.00 | 3.50 | 5.80 | 3.40 |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD (quality) | - | 65.0 | - | 79.0 | - | 88.0 | - | 78.6 | - | 61.6 |
| RSD (preferred) | - | 29.0 | - | 25.0 | - | 61.0 | - | 54.8 | - | 35.0 |
| CPUE (total) | - | 89.6 | - | 38.2 | - | 40.0 | - | 45.2 | - | 43.6 |
| CPUE \geq Stock | - | 72.3 | - | 34.5 | - | 36.4 | - | 40.4 | - | 17.8 |
| CPUE \geq MLL (15-inches) | - | 48.5 | - | 8.5 | - | 32.6 | - | 18.1 | - | 7.0 |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | 334.0 | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | - | 96.9 | - | 96.5 | - | 101.7 | - | 91.7 | - | 93.8 |
| Quality | - | 101.6 | - | 87.1 | - | 103.1 | - | 92.1 | - | 111.2 |
| Preferred | - | 98.1 | - | 87.2 | - | 102.2 | - | 100.6 | - | 92.8 |
| Memorable | - | 97.1 | - | 96.5 | - | 101.3 | - | 97.3 | - | 103.5 |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | 31.5% | - | - |
| Stocking (Florida LMB) | | | | | | | | | | |
| # | 102,034 | 96,715 | 199,981 | 179,767 | 0 | 133,966 | 236,663 | 76,334 | 197,920 | 53,380 |
| #/Acre | 2.88 | 2.73 | 5.65 | 5.08 | 0.00 | 3.78 | 6.69 | 2.16 | 5.59 | 1.50 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate, num./hr (intended) | N/A | N/A | 0.00 | 0.48 | 2.63 | N/A | - | 0.65 | 0.64 | - |
| Catch Rate, num./hr (any black bass) | 1.12 | 1.18 | 1.13 | 1.02 | 0.89 | 0.86 | - | 0.62 | 0.74 | 0.65 |
| Harvest Rate, num./hr (any black bass) | 0.12 | 0.06 | 0.08 | 0.06 | 0.08 | 0.02 | - | 0.00 | 0.05 | 0.01 |
| % Released | 88.3% | 94.5% | 93.3% | 93.2% | 91.5% | 97.9% | - | 89.4% | 92.4% | 98.2% |
| Mean Weight | 2.34 | 3.03 | 2.92 | 2.90 | 2.93 | 3.63 | - | 3.42 | 3.36 | 4.15 |

Smallmouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-------|-------|-------|--------|-------|-------|------|--------|------|-------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (spring electrofishing) | - | - | - | - | - | - | - | - | - | - |
| CPUE (mid-summer seine) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.30 | 0.30 | 2.10 | 0.30 | 1.00 |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | - | - | - | - | - | - | - | - | - | - |
| RSD (preferred) | - | - | - | - | - | - | - | - | - | - |
| CPUE (preferred) | - | - | - | - | - | - | - | - | - | - |
| CPUE (total) | - | - | - | - | - | - | - | - | - | - |
| CPUE \geq Stock | - | - | - | - | - | - | - | - | - | - |
| CPUE \geq Preferred | - | - | - | - | - | - | - | - | - | - |
| CPUE \geq MLL (18-inches) | - | - | - | - | - | - | - | - | - | - |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | - | - | - | - | - | - | - |
| Preferred | - | - | - | - | - | - | - | - | - | - |
| Memorable | - | - | - | - | - | - | - | - | - | - |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate, num./hr (intended) | 0.00 | N/A | N/A | N/A | N/A | N/A | - | N/A | - | - |
| Catch Rate, num./hr (any black bass) | 1.12 | 1.18 | 1.13 | 1.02 | 0.89 | 0.86 | - | 0.62 | 0.74 | 0.65 |
| Harvest Rate, num./hr (any black bass) | 0.12 | 0.06 | 0.08 | 0.06 | 0.08 | 0.02 | - | 0.06 | 0.05 | 0.01 |
| % Released | 88.3% | 94.5% | 97.5% | 100.0% | 97.8% | 95.6% | - | 100.0% | - | 98.5% |
| Mean Weight | 2.34 | 3.03 | 3.75 | N/A | 3.63 | 4.09 | - | N/A | - | 4.70 |

Smallmouth Bass (Target Sample)

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | | 0.70 | | 0.40 | | | | N/A | - | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD (quality) | | 75 | | 70 | | | | 76 | - | - |
| RSD (preferred) | | 38.0 | | 43.0 | | | | 61 | - | - |
| CPUE (preferred) | | - | | 6.9 | | | | 16.3 | - | - |
| CPUE (total) | | 18.5 | | 22.3 | | | | 21.5 | - | - |
| CPUE \geq Stock | | 17.8 | | 21.9 | | | | 21.5 | - | - |
| CPUE \geq Preferred | | 6.3 | | 9.3 | | | | 7.5 | - | - |
| CPUE \geq MLL (18-inches) | | 0.7 | | | | | | 0.4 | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | | | | - | - | - |
| Length Age-3 | | | | | | | | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | | 82.9 | | 93.6 | | | | 95.1 | - | - |
| Quality | | 92.7 | | 85.0 | | | | 84.4 | - | - |
| Preferred | | 87.6 | | 81.0 | | | | 85.6 | - | - |
| Memorable | | 87.1 | | 80.2 | | | | 93.4 | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | | | | | | | | - | - | - |

Targeted Samples for SMB are at night unless otherwise noted.

Spotted Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|--------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (spring electrofishing) | - | 1.10 | - | - | - | 0.00 | - | 0.57 | - | - |
| CPUE (mid-summer seine) | 3.10 | 1.90 | 1.10 | 1.30 | 1.00 | 1.10 | - | 1.10 | 1.90 | 1.40 |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD (quality) | - | 71.0 | - | - | - | 63.0 | - | 62.3 | - | 60.0 |
| RSD (preferred) | - | 6.0 | - | - | - | 21.0 | - | 18.8 | - | 10.0 |
| CPUE (total) | - | 10.0 | - | - | - | 4.4 | - | 4.9 | - | 4.0 |
| CPUE \geq Stock | - | 8.9 | - | - | - | 4.4 | - | 2.7 | - | 2.3 |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | - | 116.0 | - | - | - | 106.3 | - | 101.4 | - | 94.5 |
| Quality | - | 96.0 | - | - | - | 94.9 | - | 94.4 | - | 84.3 |
| Preferred | - | 99.0 | - | - | - | 95.7 | - | 94.7 | - | 95.3 |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate, num./hr (intended) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | - | - |
| Catch Rate, num./hr (any black bass) | 1.12 | 1.18 | 1.13 | 1.02 | 0.89 | 0.86 | 0.86 | 0.62 | 0.74 | 0.65 |
| Harvest Rate, num./hr (any black bass) | 0.12 | 0.06 | 0.08 | 0.06 | 0.08 | 0.02 | 0.02 | 0.06 | 0.05 | 0.01 |
| % Released | 88.3% | 94.5% | 99.2% | 99.6% | 99.7% | 96.8% | 96.8% | 97.7% | - | 100.0% |
| Mean Weight | 2.34 | 3.03 | 1.52 | 1.30 | 2.30 | 1.90 | 1.90 | 1.08 | - | - |

Black Crappie

| | 2007 | 2008 | 2009 | 2010* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|------|-----------|-----------|-----------|
| Recruitment (trap netting) | | | | | | | | | | |
| Substock CPUE | 1.20 | - | 2.80 | 0.85 | 0.13 | 0.00 | 1.55 | 2.52 | 0.35 | 7.90 |
| CPUE (mid-summer seine) | | | | | | | | 0.5 | 0.3 | 0.1 |
| Density (electrofishing) | | | | | | | | | | |
| | | | | | | | | ** | | |
| PSD (quality) | - | 96.0 | - | 92.0 | - | 100.0 | - | 100.0 | - | 95.0 |
| RSD (preferred) | - | 69.0 | - | 71.0 | - | 87.0 | - | 62.0 | - | 67.0 |
| CPUE (total) | - | 13.6 | - | 161.3 | - | 4.2 | - | 3.0 | - | 221.9 |
| CPUE ≥ Stock | - | 13.6 | - | 148.2 | - | 4.2 | - | - | - | 221.9 |
| CPUE ≥ MLL (10-inches) | - | 10.2 | - | 116.0 | - | 3.6 | - | - | - | 142.6 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | 96.4 | - | 109.4 | - | 86.1 | - | - | - | 100.5 |
| Quality | - | 100.4 | - | 102.0 | - | 97.1 | - | - | - | 93.7 |
| Preferred | - | 99.3 | - | 94.8 | - | 87.1 | - | - | - | 89.7 |
| Memorable | - | 96.5 | - | 91.9 | - | 84.3 | - | - | - | 83.7 |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 70,513 | 40,793 | 44,290 | 77,955 | 73,257 | 85,180 | - | 71,938 | 64,681 | 55,061 |
| Angler Hours/Acre | 1.99 | 1.15 | 1.25 | 2.20 | 2.07 | 2.41 | - | 2.03 | 1.83 | 1.56 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 2.70 | 2.09 | 2.39 | 2.41 | 2.29 | 2.51 | - | 2.17 | 2.38 | 2.48 |
| Harvest Rate (any crappie) | 1.02 | 0.84 | 1.07 | 1.07 | 0.88 | 1.00 | - | 0.93 | 1.33 | 1.24 |
| % Released (black crappie) | 64.1% | 63.1% | 56.8% | 57.0% | 65.1% | 60.2% | - | 54.7% | 44.3% | 51.5% |
| Mean Weight (black crappie) | 0.80 | 0.84 | 0.81 | 0.85 | 0.88 | 0.81 | - | 0.76 | 0.80 | 0.78 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | \$388,630 | \$289,610 | \$293,460 | \$430,240 | \$471,190 | \$226,610 | - | \$157,090 | \$146,750 | \$138,670 |

Non-target sample unless otherwise noted.

* Target Sample

** Data collected from trap netting

White Crappie

| | 2007 | 2008 | 2009 | 2010* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|------|-----------|-----------|-----------|
| Recruitment (trap netting) | | | | | | | | | | |
| Substock CPUE | 0.60 | - | 3.75 | 0.75 | - | - | 0.50 | - | - | 0.72 |
| CPUE (mid-summer seine) | | | | | | | | 0.5 | 0.3 | 0 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | - | - | - | | - | 91.0 | - | - | - | - |
| RSD (preferred) | - | - | - | | - | 45.0 | - | - | - | - |
| CPUE (total) | - | - | - | 6.3 | - | 2.0 | - | - | - | - |
| CPUE ≥ Stock | - | - | - | | - | | - | - | - | - |
| CPUE ≥ MLL (10-inches) | - | - | - | | - | | - | - | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | - | - | - | - | - | - | - |
| Preferred | - | - | - | - | - | - | - | - | - | - |
| Memorable | - | - | - | - | - | - | - | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 70,513 | 40,793 | 44,290 | 77,955 | 73,257 | 85,180 | - | 71,938 | 64,681 | 55,061 |
| Angler Hours/Acre | 1.99 | 1.15 | 1.25 | 2.20 | 2.07 | 2.41 | - | 2.03 | 1.83 | 1.56 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 2.70 | 2.09 | 2.39 | 2.41 | 2.29 | 2.51 | - | 2.17 | 2.38 | 2.48 |
| Harvest Rate (any crappie) | 1.02 | 0.84 | 1.07 | 1.07 | 0.88 | 1.00 | - | 0.93 | 1.33 | 1.24 |
| % Released (w hite crappie) | 68.6% | 69.5% | 61.2% | 58.2% | 60.7% | 64.5% | - | 54.4% | 48.0% | 49.5% |
| Mean Weight (w hite crappie) | 0.75 | 0.87 | 0.77 | 0.84 | 0.83 | 0.79 | - | 0.76 | 0.77 | 0.76 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | \$388,630 | \$289,610 | \$293,460 | \$430,240 | \$471,190 | \$226,610 | - | \$157,090 | \$146,750 | \$138,670 |

Non-target sample unless otherwise noted.

* Target Sample

Blacknose Crappie

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|------|-----------|-----------|-----------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 70,513 | 40,793 | 44,290 | 77,955 | 73,257 | 85,180 | - | 71,938 | 64,681 | 55,061 |
| Angler Hours/Acre | 1.99 | 1.15 | 1.25 | 2.20 | 2.07 | 2.41 | - | 2.03 | 1.83 | 1.56 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 2.70 | 2.09 | 2.39 | 2.41 | 2.29 | 2.51 | - | 2.17 | 2.38 | 2.48 |
| Harvest Rate (any crappie) | 1.02 | 0.84 | 1.07 | 1.07 | 0.88 | 1.00 | - | 0.93 | 1.33 | 1.24 |
| % Released (blacknose crappie) | 21.3% | 100.0% | 90.7% | 80.7% | 45.2% | 0.0% | - | N/A | 0.0% | 29.5% |
| Mean Weight (blacknose crappie) | 0.86 | - | 1.08 | 1.00 | 0.65 | 0.65 | - | N/A | 0.80 | 1.10 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | \$388,630 | \$289,610 | \$293,460 | \$430,240 | \$471,190 | \$226,610 | - | \$157,090 | \$146,750 | \$138,670 |

Sauger

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|---------|----------|----------|----------|----------|----------|------|----------|---------|---------|
| Recruitment (gill netting) | | | | | | | | | | |
| Substock CPUE | - | - | - | - | - | - | - | - | - | - |
| Density (gill netting) | | | | | | | | | | |
| PSD | - | - | - | 99.0 | - | - | - | - | - | - |
| RSD (preferred) | - | - | - | 71.0 | - | - | - | - | - | - |
| CPUE (total) | - | - | - | 9.6 | - | - | - | - | - | - |
| CPUE \geq Stock | - | - | - | 9.6 | - | - | - | - | - | - |
| CPUE \geq MLL (15-inches) | - | - | - | 6.8 | - | - | - | - | - | - |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (gill netting) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | 91.8 | - | - | - | - | - | - |
| Preferred | - | - | - | 102.9 | - | - | - | - | - | - |
| Memorable | - | - | - | - | - | - | - | - | - | - |
| Mortality (gill netting) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | 111,757 | 166,853 | 69,699 | 80,348 | 70,311 | - | 0 | 0 | 0 | 0 |
| #/Acre | 3.2 | 4.7 | 2.0 | 2.3 | 2.0 | - | 0.0 | 0.0 | 0.0 | 0.0 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | 491 | 8,829 | 10,277 | 3,655 | 4,012 | 5,879 | - | 2,181 | 2,943 | 973 |
| Angler Hours/Acre | 0.01 | 0.25 | 0.29 | 0.10 | 0.11 | 0.17 | - | 0.06 | 0.08 | 0.03 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 1.23 | 2.73 | 1.23 | 1.59 | 1.11 | 1.14 | - | 0.02 | 0.58 | 0.00 |
| Harvest Rate (intended) | 0.19 | 0.22 | 0.34 | 0.56 | 0.44 | 0.34 | - | 0.00 | 0.32 | 0.00 |
| % Released | 85.2% | 92.9% | 72.5% | 71.8% | 58.2% | 69.0% | - | 100.0% | 41.9% | 64.4% |
| Mean Weight | 1.50 | 1.52 | 1.66 | 1.67 | 1.53 | 1.47 | - | N/A | 1.44 | 1.50 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Sauger | \$3,330 | \$43,850 | \$83,240 | \$17,250 | \$22,550 | \$16,900 | - | \$14,390 | \$4,730 | \$1,750 |

Walleye

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|------|------|------|------|---------|---------|----------|
| Recruitment (gill netting) | | | | | | | | | | |
| Substock CPUE | - | - | - | - | - | - | - | - | - | - |
| CPUE (mid-summer seine) | - | - | - | - | - | - | - | 0.3 | 0 | 0 |
| Density (gill netting) | | | | | | | | | | |
| PSD | - | - | - | - | - | - | - | - | - | - |
| RSD (preferred) | - | - | - | - | - | - | - | - | - | - |
| CPUE (total) | - | - | - | - | - | - | - | - | - | - |
| CPUE ≥ Stock | - | - | - | - | - | - | - | - | - | - |
| CPUE ≥ MLL (16-inches) | - | - | - | - | - | - | - | - | - | - |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (gill netting) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | - | - | - | - | - | - | - |
| Preferred | - | - | - | - | - | - | - | - | - | - |
| Memorable | - | - | - | - | - | - | - | - | - | - |
| Mortality (gill netting) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | - | - | - | - | - | - | - | 267,247 | 192,422 | 107,835 |
| #/Acre | - | - | - | - | - | - | - | 7.55 | 5.4 | 3.1 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | - | - | - | - | - | - | - | 604 | 4,679 | 3,446 |
| Angler Hours/Acre | - | - | - | - | - | - | - | 0.02 | 0.13 | 0.10 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | - | - | - | - | - | - | 0.28 | 1.11 | 0.43 |
| Harvest Rate (intended) | - | - | - | - | - | - | - | 0.00 | 0.60 | 0.34 |
| % Released | - | - | - | - | - | - | - | 100.0% | 79.7% | 38.8% |
| Mean Weight | - | - | - | - | - | - | - | N/A | 2.09 | 1.83 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Walleye | - | - | - | - | - | - | - | \$1,060 | \$8,340 | \$10,660 |

Striped Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|----------|-----------|----------|-----------|-----------|-----------|------|-----------|--------|----------|
| Recruitment (gill netting) | | | | | | | | | | |
| Substock CPUE | | | | | | | | | | - |
| Density (gill netting) | | | | | | | | | | |
| PSD | | | | | | | | | | - |
| RSD (preferred) | | | | | | | | | | - |
| CPUE (total) | | | | | | | | | | - |
| CPUE ≥ Stock | | | | | | | | | | - |
| CPUE ≥ 15-inches | | | | | | | | | | - |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-2 | | | | | | | | | | - |
| Length Age-3 | | | | | | | | | | - |
| Condition (gill netting) | | | | | | | | | | |
| Stock | | | | | | | | | | - |
| Quality | | | | | | | | | | - |
| Preferred | | | | | | | | | | - |
| Memorable | | | | | | | | | | - |
| Mortality (gill netting) | | | | | | | | | | |
| Total Mortality | | | | | | | | - | | - |
| Stocking | | | | | | | | | | |
| # | | | | | 50,623 | | | - | 51,265 | 100,013 |
| #/Acre | | | | | 1.4 | | | - | 1.5 | 2.8 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | 8,908 | 19,563 | 10,582 | 16,386 | 14,870 | 17,221 | - | 12,156 | 14,089 | 13,091 |
| Angler Hours/Acre | 0.25 | 0.55 | 0.30 | 0.46 | 0.42 | 0.49 | - | 0.34 | 0.40 | 0.37 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0.44 | 0.58 | 0.43 | 0.84 | 0.43 | 0.73 | - | 0.87 | 0.42 | 0.63 |
| Harvest Rate (intended) | 0.17 | 0.21 | 0.10 | 0.11 | 0.02 | 0.00 | - | 0.01 | 0.05 | 0.13 |
| % Released | 63.3% | 66.0% | 78.9% | 88.4% | 94.7% | 93.9% | - | 96.6% | 88.9% | 66.3% |
| Mean Weight | 19.71 | 15.38 | 16.09 | 17.86 | 15.96 | 13.84 | - | 23.38 | 14.79 | 16.87 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Striped Bass | \$86,030 | \$214,510 | \$91,570 | \$295,510 | \$295,420 | \$282,470 | - | \$186,610 | | \$53,340 |

Bluegill

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|----------|---------|----------|----------|----------|---------|------|----------|----------|----------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | | | | | | | | - | | - |
| CPUE (mid-summer seine) | | | | 17.6 | 6.10 | 13.6 | 10.9 | 8.00 | 19.5 | 12.5 |
| Substock CPUE (trap netting) | | | | | | | | 15.05 | 5.98 | 32.37 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | | | | | | | | - | - | - |
| RSD (preferred) | | | | | | | | - | - | - |
| CPUE (total) | | | | | | | | - | - | - |
| CPUE \geq Stock | | | | | | | | - | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | | | | - | - | - |
| Length Age-3 | | | | | | | | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | | | | | | | | - | - | - |
| Quality | | | | | | | | - | - | - |
| Preferred | | | | | | | | - | - | - |
| Memorable | | | | | | | | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (any sunfish) | 3,889 | 963 | 2,589 | 2,237 | 2,157 | 1,460 | - | 16,177 | 6,896 | 15,158 |
| Angler Hours/Acre | 0.11 | 0.03 | 0.07 | 0.06 | 0.06 | 0.04 | - | 0.46 | 0.19 | 0.43 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any sunfish) | 11.30 | 12.01 | 6.60 | 9.29 | 8.23 | 12.98 | - | 6.53 | 6.64 | 7.20 |
| Harvest Rate (any sunfish) | 6.45 | 5.21 | 2.32 | 2.61 | 5.43 | 6.98 | - | 3.19 | 3.30 | 3.85 |
| % Released (bluegill) | 68.8% | 71.6% | 73.6% | 81.2% | 76.7% | 74.3% | - | 61.0% | 62.9% | 59.2% |
| Mean Weight (bluegill) | 0.27 | 0.26 | 0.25 | 0.27 | 0.25 | 0.25 | - | 0.23 | 0.23 | 0.23 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Sunfish | \$17,610 | \$1,920 | \$20,920 | \$21,480 | \$20,530 | \$4,140 | - | \$32,870 | \$14,340 | \$28,540 |

Non-target sample unless otherwise noted.

Redear

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012* | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|----------|---------|----------|----------|----------|---------|------|----------|----------|----------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | | 0.40 | | | | 0.00 | | - | - | - |
| CPUE (mid-summer seine) | | | | 0.6 | 0.80 | 0.40 | 1.80 | 0.40 | 0.40 | 2.00 |
| Substock CPUE (trap netting) | | | | | | | | 9.65 | 2.65 | 8.9 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | | 48.0 | | 37.0 | | 59.0 | | - | - | 53.8 |
| RSD (preferred) | | 11.0 | | 0.0 | | 1.0 | | - | - | 9.0 |
| CPUE (total) | | 39.5 | | 17.6 | | 65.2 | | - | - | 19.8 |
| CPUE \geq Stock | | 39.1 | | 17.6 | | 65.2 | | - | - | 10.3 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | | | | - | - | - |
| Length Age-3 | | | | | | | | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | | 86.2 | | | | | | - | - | 114.0 |
| Quality | | 87.5 | | | | | | - | - | 86.1 |
| Preferred | | 85.5 | | | | | | - | - | 102.3 |
| Memorable | | | | | | | | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (anysunfish) | 3,889 | 963 | 2,589 | 2,237 | 2,157 | 1,460 | - | 16,177 | 6,896 | 15,158 |
| Angler Hours/Acre | 0.11 | 0.03 | 0.07 | 0.06 | 0.06 | 0.04 | - | 0.46 | 0.19 | 0.43 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any sunfish) | 11.30 | 12.01 | 6.60 | 9.29 | 8.23 | 12.98 | - | 6.53 | 6.64 | 7.20 |
| Harvest Rate (any sunfish) | 6.45 | 5.21 | 2.32 | 2.61 | 5.43 | 6.98 | - | 3.19 | 3.30 | 3.85 |
| % Released (redeer) | 35.0% | 34.7% | 52.4% | 35.1% | 56.2% | 40.8% | - | 46.2% | 41.9% | 38.5% |
| Mean Weight (redeer) | 0.38 | 0.48 | 0.43 | 0.36 | 0.39 | 0.37 | - | 0.33 | 0.34 | 0.39 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Sunfish | \$17,610 | \$1,920 | \$20,920 | \$21,480 | \$20,530 | \$4,140 | - | \$32,870 | \$14,340 | \$28,540 |

Non-target sample unless otherwise noted.

* Broodfish collection. No weights were taken.

Catfish

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|------|-----------|-----------|-----------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all catfish) | 101,168 | 100,324 | 99,968 | 148,757 | 153,140 | 108,984 | - | 90,299 | 114,126 | 52,310 |
| Angler Hours/Acre | 2.86 | 2.83 | 2.82 | 4.20 | 4.33 | 3.08 | - | 2.55 | 3.22 | 1.48 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any catfish) | 1.85 | 1.48 | 1.42 | 1.23 | 1.04 | 1.30 | - | 1.35 | 1.62 | 1.31 |
| Harvest Rate (any catfish) | 1.12 | 0.63 | 0.70 | 0.54 | 0.34 | 0.49 | - | 0.33 | 0.67 | 0.38 |
| % Released (channel) | 45.0% | 56.2% | 50.5% | 51.2% | 77.6% | 47.8% | - | 70.8% | 56.7% | 60.5% |
| Mean Weight (channel) | 3.16 | 3.29 | 3.34 | 3.37 | 3.20 | 3.26 | - | 3.15 | 2.87 | 2.79 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Catfish | \$660,490 | \$730,840 | \$717,470 | \$811,940 | \$819,040 | \$260,000 | - | \$233,300 | \$264,820 | \$121,790 |

Shad

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------|------|------|------|------|------|------|------|------|------|------|
| Density (electrofishing) | | | | | | | | | | |
| Alewife CPUE | | | | | | | | - | - | - |
| Gizzard CPUE | | 17.1 | | | | 15.3 | | - | - | 15.4 |
| Gizzard CPUE (mid-summer seine) | | | | | | | | 1.1 | - | 0.1 |
| Threadfin CPUE | | 26.7 | | | | 6.7 | | - | - | - |
| Threadfin CPUE (mid-summer seine) | | | | | | | | 1.5 | 0.0 | 55.1 |

Habitat Enhancement - 2016

| Type of Work | Details | Quantity | |
|----------------|---------|----------|-----------|
| | | New | Renovated |
| None performed | | | |

Water Quality Monitoring - 2016

| Parameter | Sampling Period | Water Quality |
|------------------|-----------------|---------------|
| Temperature | | |
| Dissolved Oxygen | | |
| PH | | |
| Conductivity | | |

Chickamauga Reservoir Headwater (Watts Bar tailwaters)**(2016 Annual Report)****Description**

Area: Due to the uniqueness displayed in “tailwater areas”, a more in-depth survey of this area was determined to be a good management tool into the overall evaluation of the reservoir. However, due to drastic differences in flows, habitat, temperature, clarity, etc. these sampling efforts are reported specifically in relation to this “tailwater area” and not the reservoir as a whole. Due to the fact that conditions in this area can fluctuate drastically from day to day as well as hour to hour, thus possibly effecting survey outcomes, it is advised that established long time trends be utilized and considered before making any management observations or recommendations.

This study area is geographically located between Watts Bar Dam and the first boat access area (Meigs Co.) located at the end of Pinhook Road.

Counties: Meigs and Rhea

Summary: A good sample of white bass and forage fish (threadfin and gizzard shad) were collected during the 2016 Chickamauga headwater electrofishing surveys (see tables below). Only largemouth bass out of all the black bass species were represented in this particular data collection. Excellent opportunities for smallmouth bass also exists in this area based on fishermen interviews and past observations during electrofishing used for data collections or brood fish. More surveys are warranted in the future, especially with a focus on walleye in an effort to evaluate the walleye stocking program at Chickamauga reservoir.

Largemouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014* | 2015 | 2016 |
|--------------------------------------------|-------|------|------|-------|------|------|------|-------|------|------|
| Recruitment (spring electrofishing) | | | | | | | | | | |
| Substock CPUE | 8.80 | | | 1.44 | | 3.00 | | 0.95 | - | - |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD (quality) | 87 | | | 77 | | 81 | | 100 | - | 100 |
| RSD (preferred) | 67.0 | | | 31.0 | | 69.0 | | 91.0 | - | 54.0 |
| CPUE (total) | 43.2 | | | 13.8 | | 11.0 | | 15.6 | - | 10.1 |
| CPUE \geq Stock | 34.4 | | | 12.4 | | 8.0 | | 17.7 | - | 5.5 |
| CPUE \geq MLL (15-inches) | 22.9 | | | 3.8 | | 6.5 | | 12.2 | - | 2.5 |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | - | | | | | | | - | - | - |
| Length Age-3 | - | | | | | | | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 107.8 | | | 86.8 | | 91.8 | | 110.2 | - | - |
| Quality | 117.6 | | | 95.8 | | 87.3 | | 95.4 | - | - |
| Preferred | 120.7 | | | 90.5 | | 89.8 | | 111.7 | - | - |
| Memorable | 124.0 | | | 123.2 | | 93.3 | | 112.4 | - | - |

*note: sample taken during genetic sampling period

Smallmouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Recruitment (spring electrofishing) | | | | | | | | | | |
| Substock CPUE | 7.70 | | | | | | | | - | - |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | 7 | | | | | | | | - | - |
| RSD (preferred) | 7 | | | | | | | | - | - |
| CPUE (preferred) | - | | | | | | | | - | - |
| CPUE (total) | 22.1 | | | | | 2.0 | | | - | - |
| CPUE \geq Stock | 14.2 | | | 5.7 | | | | | - | - |
| CPUE \geq Preferred | 0.9 | | | | | | | | - | - |
| CPUE \geq MLL (18-inches) | 0.0 | | | | | | | | - | - |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | - | | | | | | | | - | - |
| Length Age-3 | - | | | | | | | | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 96.2 | | | | | | | | - | - |
| Quality | - | | | | | | | | - | - |
| Preferred | - | | | | | | | | - | - |
| Memorable | 96.1 | | | | | | | | - | - |

Spotted Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------------------------|-------|------|------|------|------|------|------|------|------|------|
| Recruitment (spring electrofishing) | | | | | | | | | | |
| Substock CPUE | 16.80 | | | | | | | - | - | - |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | 31 | | | | | | | - | - | - |
| RSD (preferred) | 0 | | | | | | | - | - | - |
| CPUE (total) | 30.9 | | | 5.2 | | 5.0 | | - | - | - |
| CPUE \geq Stock | 14.1 | | | | | | | - | - | - |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | | | | - | - | - |
| Length Age-3 | | | | | | | | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 112.3 | | | | | | | - | - | - |
| Quality | 111.3 | | | | | | | - | - | - |
| Preferred | - | | | | | | | - | - | - |

Striped Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------------------------|------|------|------|-------|------|------|------|------|------|------|
| Recruitment (spring electrofishing) | | | | | | | | | | |
| Substock CPUE | | | | 0.00 | | | | - | - | - |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | | | | 87 | | | | - | - | - |
| RSD (preferred) | | | | 34.0 | | | | - | - | - |
| CPUE (total) | | | | 40.1 | | | | - | - | - |
| CPUE \geq Stock | | | | 40.1 | | | | - | - | - |
| CPUE \geq Preferred | | | | 13.8 | | | | - | - | - |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | | | | - | - | - |
| Length Age-3 | | | | | | | | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | | | | 101.8 | | | | - | - | - |
| Quality | | | | 91.8 | | | | - | - | - |
| Preferred | | | | 79.4 | | | | - | - | - |
| Memorable | | | | 78.5 | | | | - | - | - |

Shad

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------|------|------|------|------|------|------|------|------|------|-------|
| Density (electrofishing) | | | | | | | | | | |
| Alewife CPUE | | | | | | | | | | |
| Gizzard CPUE | | | | | | | | | | 62.5 |
| Threadfin CPUE | | | | | | | | | | 149.6 |

White Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | | | | | | | | | | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | | | | | | | | | | 97 |
| RSD (preferred) | | | | | | | | | | 87.0 |
| CPUE (total) | | | | | | | | | | 21.2 |
| CPUE \geq Stock | | | | | | | | | | 15.9 |
| CPUE \geq Preferred | | | | | | | | | | 11.2 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | | | | | | - |
| Length Age-3 | | | | | | | | | | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | | | | | | | | | | - |
| Quality | | | | | | | | | | - |
| Preferred | | | | | | | | | | - |
| Memorable | | | | | | | | | | - |

Chickamauga Angler Attitude Surveys (2016)

Fish management has been described in scientific literature as the management of three vital entities; organisms, habitat and people, all of which are inner linked. Biologists are continually evaluating this trilogy in efforts to better manage specified aquatic resources and thus offer sound management recommendations. For example, the Region 3 Reservoir crew monitors fish populations through such methods as electrofishing, netting, creel surveys, seining, etc. Additionally, we currently have a five year strategic habitat plan which addresses reservoir habitat needs and solutions achieved by various habitat projects. Creel surveys, public meetings, sport fishing comment periods, etc. all aim at obtaining input from the public, whole or in part. These data surveys and projects are vital to the overall management of the aquatic resources within the reservoirs.

Public input can be a very useful tool for biologists in the overall management of a reservoir by defining areas of concern or approval. In an effort to accomplish this, we decided to use our annual roving creel program to be the vehicle to conduct a yearlong angler attitude survey starting in the year 2013. There was no realized added expense with this survey with only an increase of interview time (2-5 minutes). Anglers were asked a series of questions (see questionnaire in Appendix) in addition to routine, state-wide standardized creel questions. Typical creel data will gather such useful data as angling pressure, expenditures, harvest rates, species composition, catch rates, average size of caught fish, socioeconomics, etc. The goal of the angler attitude survey was to achieve just what the name implies but would reflect actual anglers fishing specified reservoirs rather than general anglers with unspecified destinations or past recollections of trips gone by. Similar statewide surveys have been conducted by University of Tennessee (UT) in the past for TWRA but have been more general and broader in scope with no emphasis placed on a specific reservoir. Often times, minority user groups succeed in representing the sentiment of the angling public when actually it is not the overall view of an unbiased assessment of multiple anglers. The results of the angler attitude survey have already proven to be very informative. Future reservoir management decisions will benefit from this type of insight from anglers.

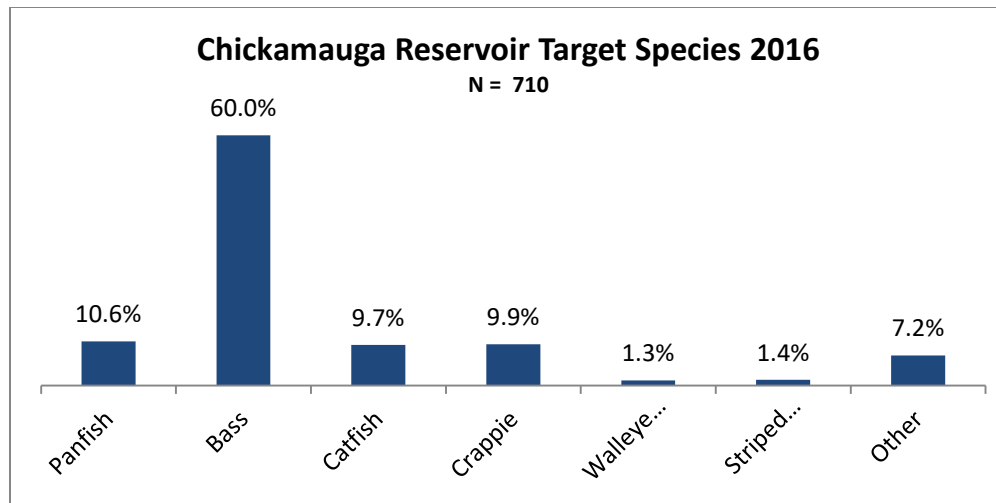
We sampled our angling public with attitude surveys again in 2016 on the four reservoirs in Region 3 that creel surveys were conducted (Center Hill, Chickamauga, Dale Hollow, and Watts Bar Reservoirs). Overall “approval” of Region 3 reservoirs by anglers who fish these reservoirs is very favorable at the current time according to these 2016 surveys. We feel confident that this summary of our “angler attitudes” will provide valuable insight to how these particular reservoirs are evaluated by our angling public. This type information coupled with our biological data should prove to be a good balance when we move forward with management decisions regarding reservoirs in Region 3 as warranted.

This project and overall fish management would not be possible without the dedication of our creel clerks (Danny Stone, Tim Poole) and the Region 3 reservoir fisheries crew.

Results from the Angler Attitude Survey conducted at Chickamauga Reservoir are as follows:

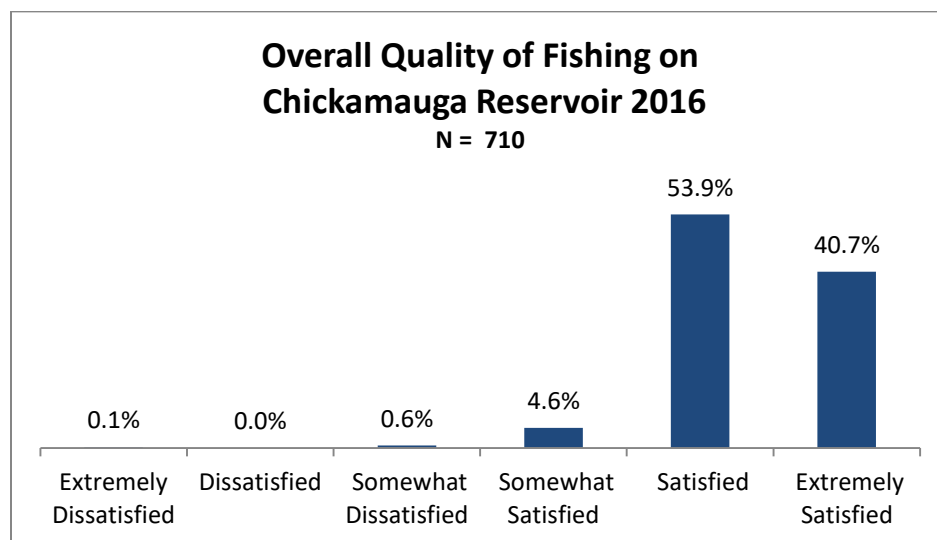
There were a total of 710 anglers who were fishing at Chickamauga Reservoir interviewed by a creel clerk for the angler attitude survey in 2016. This was a roving creel survey performed via boat and this angler attitude survey was collected in conjunction with standardized creel surveys and in accordance with statewide protocol.

The most targeted species of fish by anglers on Chickamauga was bass (60.0%) with panfish (bluegill and redear) being a distant second (10.6%) followed closely by catfish and crappie, see graph below.

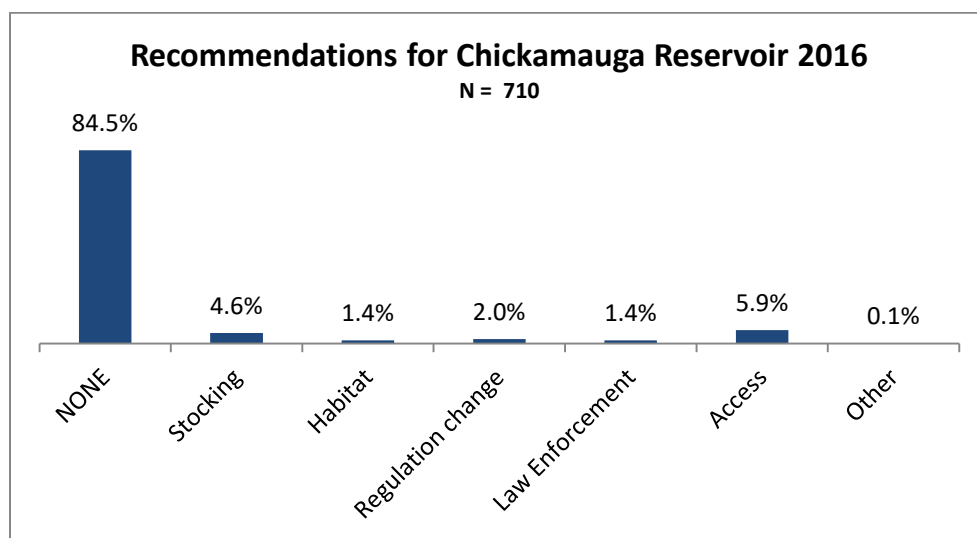


These surveys also revealed that fishermen who identified “Bass” (n=426) as their primary target species, 84.3% of those (359) also fished bass tournaments. On average, these bass tournament fishermen at Chickamauga Reservoir fished an average of 9.0 bass tournaments/year at Chickamauga Reservoir.

As the graph below depicts, anglers expressed a high satisfaction rating (99.3%) in 2016 overall when asked about the “overall quality of fishing on Chickamauga Reservoir”.



When anglers (n=710) who fish Chickamauga reservoir were asked if they had any recommendations for the overall management of Chickamauga reservoir the large majority (84.5%) had “NONE” (graph below). Boating access was the category with the most recommendations or areas of concern. This is due in large part to the fishing pressure being realized at Chickamauga Reservoir currently from national exposure to the large stringers and large individual largemouth bass being caught. A high volume of bass tournaments are present on Chickamauga throughout the year which has overwhelmed the few existing boat ramps at Chickamauga. This situation is further complicated in the winter months when fewer ramps are available due to winter drawdowns leaving some ramps unusable. A Florida bass stocking program initiated in the year 2000 was the catalyst for the favorable LMB fishing currently experienced at Chickamauga. Crappie fishing here has also been ranked high nationally recently further driving the influence of anglers. Local anglers have voiced concerns of not having sufficient boat launching sites to facilitate the demand by the angling public.



Overall, the angler attitudes obtained in 2016 from those fishing at Chickamauga reservoir are ones that exhibit a high approval for the current fish management of this reservoir by TWRA.

Cordell Hull Reservoir (2016 Annual Report)

Description

Area (acres): 13,920 **Mean Depth (feet):** **Shoreline (miles):** 381

Counties: Smith, Jackson, Clay

Full Pool Elevation (feet-msl): 504 **Winter Pool Elevation (feet-msl):** 499

Dam Completion: 1973

Summary:

Spring electrofishing surveys were conducted for black bass on Cordell Hull in 2016. The next black bass electrofishing survey is planned for the spring of 2017 at Cordell Hull Reservoir. Additionally no creel surveys have been conducted on Cordell Hull since 2012. However, a roving creel survey is scheduled for Cordell Hull during the year of 2017.

Largemouth bass (LMB): Excellent opportunities exist currently for catching largemouth bass in Cordell Hull Reservoir. A trophy slot limit of 17-23" for LMB was removed in 2015 after only being in place for a few years and replaced with a regulation of 5 lmb/day, 15" minimum length limit (MLL). The trophy slot limit, which was removed, had struggled with public support as well as that of TWRA's findings per black bass electrofishing surveys thus its removal. A good forage base of gizzard and threadfin shad have helped sustain this LMB fishery through the years. However, beneficial density levels of aquatic vegetation have not remained consistent at Cordell Hull in the past several years. This is due in part to heavy flow regimes during high rainfall events and also the prolonged effects of the Wolf Creek dam repair project upstream in Kentucky that also influenced water flows. Future spring electrofishing surveys will continue to evaluate the LMB fishery at Cordell Hull. The mid-summer seining surveys were off the charts in 2010 with a CPUE of 22.1 lmb/seine haul and the second highest recorded within the last ten years in the recent 2015 survey at 13.5 lmb/seine haul and a recorded low of 2.50 lmb/seine haul realized in 2016. Overall CPUE for lmb collected during the spring electrofishing surveys for the past five years are consistent and at a favorable rate (see table below). If the LMB population densities and environmental parameters stay in place, a quality LMB fishery should be sustained in Cordell Hull Reservoir. According to the roving creel survey conducted in 2012, fishermen expended an estimated \$246,000 in pursuit of "bass" in Cordell Hull and experienced a catch rate for LMB on the average of 2.08 lmb/hour. Future creel surveys to evaluate the black bass fishery at Cordell Hull are warranted for an overall evaluation of this important fishery.

Smallmouth bass (SMB): Smallmouth bass in Cordell Hull are not as prevalent as largemouth bass but their occurrence has remained consistent over the past several years with anglers and electrofishing surveys. Smallmouth bass continue to show up in spring electrofishing surveys typically on sloping rocky banks, a preferred habitat of smallmouth bass for spawning. The overall CPUE for the 2016 spring electrofishing survey was 5.0 smb/hour. Although Cordell Hull is probably not a destination for smallmouth bass anglers, it is anticipated that anglers will have real possibilities of catching SMB while angling for bass there.

Spotted bass (SPB): Spotted bass are not observed in ongoing spring electrofishing data collection surveys. However pre-impoundment studies showed a population of SPB in rivers that would later be incorporated into what is today known as Cordell Hull Reservoir. Possible depletion of preferred spawning

areas and habitat due to establishing the reservoir are likely to blame for the apparent absence of spotted bass in Cordell Hull Reservoir.

Crappie (white, black & blacknose): Crappie fishing in Cordell Hull Reservoir remains average to good overall. According to the last roving creel survey conducted in 2012, the average catch rate was 1.65 crappie/hour. Anglers spent an estimated \$63,000 in pursuit of crappie in 2012 at Cordell Hull according to roving creel interviews. Cordell Hull is characterized as being a predominantly white crappie reservoir. However, some “black nose” black crappie and black crappie also appear in anglers’ catches. Blacknose crappie were stocked into Cordell Hull Reservoir several years ago by TWRA with fish raised at a fish pond located at McClure’s Bend (part of Cordell Hull WMA) and a small pond above Celina, both ponds were adjacent to Cordell Hull Reservoir which allowed direct stocking of these crappie without any transportation. The influence of blacknose crappie genetics, first introduced by these stockings, still show up in crappie catches currently at Cordell Hull.

Both fall trapnetting and electrofishing were utilized in 2015 as part of a data collection endeavor to look at the crappie fishery at Cordell Hull Reservoir. White crappie had a minimal representation (0.03 white crappie/net night) during the trapnetting surveys and black crappie were non-existent. Good numbers of crappie were realized during the targeted electrofishing surveys for crappie. The CPUE for white crappie (124.6 WC/hr) were much higher than the black crappie (42.3 BC/hr).

Bluegill: Good bluegill fishing opportunities exist for anglers fishing Cordell Hull. Although, according to the creel surveys in 2012, the catch rates were low compared to other reservoirs with like characteristics for preferred bluegill habitat. Mid-summer seining surveys continue to be well represented by bluegill from Cordell Hull reservoir. Bluegill and longear sunfish continue to exhibit good population densities at Cordell Hull.

Sauger: Cordell Hull offers some excellent opportunities for anglers in the pursuit of sauger. Sauger populations are self-sustaining in Cordell Hull. It is possible however that some sauger migrate upstream via locks in Cordell Hull Dam from neighboring Old Hickory Reservoir which does have an annual sauger stocking program. Cordell Hull is one of the few reservoirs in the state that can boast of such stability when referencing sauger populations. An estimated \$69,000 was spent with on trip expenditures in 2012 in pursuit of this fish according to a yearlong roving creel survey.

Walleye: A limited amount of walleye are caught in Cordell Hull Reservoir each year. The closely related sauger is more abundant at Cordell Hull and thus provides a greater opportunity for anglers. The state and world record walleye came from neighboring Old Hickory Reservoir (below Cordell Hull) back in 1960 which weighed 25 lbs. Walleye fingerlings have been stocked into Cordell Hull for the past two years with 113,835 walleye stocked in 2014 and 29,223 walleye stocked in 2015. Future creel surveys should offer a good avenue for evaluating these stockings.

Catfish: Catfishing on Cordell Hull is not as popular as in other reservoirs across the state and also in comparison to other game species of fish within this reservoir. Creel surveys in 2012 indicated low catch rates of 0.16 catfish/hour with an average weight of 1.89 lbs. for catfish caught at Cordell Hull. Anglers should expect fair success while pursuing catfish in this reservoir.

Striped bass: TWRA continues to stock striped bass annually in Cordell Hull Reservoir (65,918 fingerlings in 2016). Great numbers of gizzard and threadfin shad continue to provide a forage base very conducive to a trophy striped bass fishery. Skipjack herring are also present and the preferred food for striped bass in Cordell Hull Reservoir as well as the preferred bait for striped bass anglers. The state record striped bass weighing 65 lb. 6 oz. was caught in Cordell Hull Reservoir in the year 2000 by Mr.

Ralph H. Dallas. Past and current work on the Wolf Creek Dam in Kentucky on the upper end of Cordell Hull Reservoir has changed flow regimes within the reservoir. It is thought that this also has had influence on striped bass behaviors possibly making attempted spawning runs or seeking thermal refuges upstream in Kentucky waters. This Wolf Creek Dam repair project is now complete and normal reservoir operations will hopefully resume. Attempts to gillnet for striped bass have been challenging over past years therefore it is important to gather creel info when possible to help evaluate the striped bass population, pressure on this resource, and estimated harvest. Because of TWRA's annual stocking program of striped bass at Cordell Hull, excellent opportunities for angling should persist. A roving creel survey conducted in 2012 showed very low pressure in pursuit of striped bass on this reservoir and only an estimated \$14,000 expended in pursuit of this fish. Creel surveys will most likely be the best way to evaluate the striped bass fishery at Cordell Hull as well as the stocking success of striped bass fingerlings that are stocked annually into these waters.

Lakewide Angling Summary

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|------|---------|---------|------|------|------|------|
| Angling Pressure | | | | | | | | | | |
| Angler Hours | - | - | - | - | 178,710 | 192,583 | - | - | - | - |
| Angler Hours Per Acre | - | - | - | - | 14.9 | 16.1 | - | - | - | - |
| Angler Trips | - | - | - | - | 34,967 | 36,435 | - | - | - | - |
| Value of Fishery (angler expenditures creel) | | | | | | | | | | |
| All Species | - | - | - | - | 575,830 | 610,090 | - | - | - | - |

Black Bass, Cordell Hull Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|------|------|------|------|-----------|-----------|------|------|------|------|
| Angling Pressure | | | | | | | | | | |
| All Black Bass (hrs) | - | - | - | - | 78,904 | 62,137 | - | - | - | - |
| (hrs/acre) | - | - | - | - | 7 | 4 | - | - | - | - |
| Any Black Bass (hrs) | - | - | - | - | 75,685 | 60,386 | - | - | - | - |
| (hrs/acre) | - | - | - | - | 6 | 4 | - | - | - | - |
| Largemouth Bass (hrs) | - | - | - | - | 3,219 | 459 | - | - | - | - |
| (hrs/acre) | - | - | - | - | 0 | 0 | - | - | - | - |
| Smallmouth Bass (hrs) | - | - | - | - | - | 1,292 | - | - | - | - |
| (hrs/acre) | - | - | - | - | - | 0 | - | - | - | - |
| Spotted Bass (hrs) | - | - | - | - | - | - | - | - | - | - |
| (hrs/acre) | - | - | - | - | - | - | - | - | - | - |
| Tournaments (all black bass) | | | | | | | | | | |
| # Tournaments (BITE) | - | - | - | - | - | - | - | - | - | - |
| Pounds/Angler Day (BITE) | - | - | - | - | - | - | - | - | - | - |
| Bass/Angler Day (BITE) | - | - | - | - | - | - | - | - | - | - |
| Tournament Angler Hrs/Acre (creel) | - | - | - | - | - | - | - | - | - | - |
| Tournament Catch Rate (creel) | - | - | - | - | 1.2 | 0.7 | - | - | - | - |
| Non-Tournament Catch Rate (creel) | - | - | - | - | 0.6 | 0.6 | - | - | - | - |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| All Black Bass | - | - | - | - | \$556,380 | \$248,750 | - | - | - | - |
| Any Black Bass | - | - | - | - | \$535,420 | \$245,860 | - | - | - | - |
| Largemouth Bass | - | - | - | - | \$20,960 | \$2,330 | - | - | - | - |
| Smallmouth Bass | - | - | - | - | - | \$560 | - | - | - | - |
| Spotted Bass | - | - | - | - | - | - | - | - | - | - |

Largemouth Bass, Cordell Hull Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|------|-------|------|-------|-------|-------|------|------|-------|-------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (spring electrofishing) | - | 16.40 | - | 2.00 | - | 7.00 | - | 0.67 | - | 5.60 |
| CPUE (Mid-summer seine) | 7.10 | 7.90 | 1.10 | 22.10 | 1.30 | 3.80 | 3.50 | 3.90 | 13.50 | 2.50 |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | - | 48.0 | - | 40.0 | - | 50.0 | - | 64.4 | - | 58.6 |
| RSD (preferred) | - | 12.0 | - | 17.0 | - | 24.0 | - | 22.2 | - | 35.1 |
| CPUE (total) | - | 98.8 | - | 89.4 | - | 75.0 | - | 43.8 | - | 75.2 |
| CPUE \geq Stock | - | 82.4 | - | 87.4 | - | 68.0 | - | 43.1 | - | 69.6 |
| CPUE \geq Preferred | - | - | - | 15.0 | - | 16.4 | - | 9.6 | - | 24.4 |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | - | 95.8 | - | 87.3 | - | 90.7 | - | 85.5 | - | 93.7 |
| Quality | - | 96.5 | - | 89.8 | - | 89.8 | - | 85.9 | - | 93.0 |
| Preferred | - | 99.2 | - | 96.6 | - | 97.5 | - | 92.6 | - | 93.9 |
| Memorable | - | 98.7 | - | 100.9 | - | 99.6 | - | 99.6 | - | 102.2 |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | - | - | - | 1.42 | 2.08 | - | - | - | - |
| Harvest Rate (intended) | - | - | - | - | 0.42 | 0.00 | - | - | - | - |
| % Released | - | - | - | - | 78.6% | 77.3% | - | - | - | - |
| Mean Weight | - | - | - | - | 1.35 | 1.31 | - | - | - | - |

Smallmouth Bass, Cordell Hull Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|------|------|------|-------|-------|-------|------|------|------|-------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (spring electrofishing) | - | 0.60 | - | 0.00 | - | - | - | - | - | 0.40 |
| CPUE (mid-summer seine) | - | - | 0.10 | - | 0.00 | 0.10 | 0.10 | 0.10 | 0.30 | 1.00 |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | - | 77.0 | - | 52.0 | - | - | - | - | - | 75.0 |
| RSD (preferred) | - | 19.0 | - | 43.0 | - | - | - | - | - | 40.0 |
| CPUE (preferred) | - | - | - | 1.2 | - | - | - | - | - | 0.6 |
| CPUE (total) | - | 5.8 | - | 4.6 | - | 1.8 | - | 1.6 | - | 5.0 |
| CPUE \geq Stock | - | 5.6 | - | 4.6 | - | - | - | - | - | 4.0 |
| CPUE \geq Preferred | - | 1.0 | - | 2.0 | - | - | - | - | - | 1.6 |
| CPUE \geq MLL (18-inches) | - | - | - | - | - | - | - | - | - | 0.6 |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | - | 90.3 | - | 153.7 | - | - | - | - | - | 109.2 |
| Quality | - | 87.8 | - | 78.2 | - | - | - | - | - | 82.1 |
| Preferred | - | 89.3 | - | 80.9 | - | - | - | - | - | 80.0 |
| Memorable | - | 86.6 | - | 77.6 | - | - | - | - | - | 72.6 |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | - | - | - | - | 0.00 | - | - | - | - |
| Harvest Rate (intended) | - | - | - | - | - | 0.00 | - | - | - | - |
| % Released | - | - | - | - | 84.2% | 22.3% | - | - | - | - |
| Mean Weight | - | - | - | - | 1.50 | 3.40 | - | - | - | - |

White Crappie, Cordell Hull Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014* | 2015* | 2016 |
|-----------------------------------------------------|------|------|------|------|-----------|----------|------|-------|-------|------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (Trap netting) | - | - | - | - | - | - | - | 0.00 | 0.03 | - |
| CPUE (mid-summer seine) | - | - | - | - | - | - | - | 0.10 | - | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | - | 96.0 | - | - | - | - | - | 81.5 | 99.4 | - |
| RSD (preferred) | - | 96.0 | - | - | - | - | - | 59.3 | 84.0 | - |
| CPUE (total) | - | 5.4 | - | - | - | 2.4 | - | 11.7 | 124.6 | 3.8 |
| CPUE \geq Stock | - | 5.4 | - | - | - | - | - | 11.7 | 124.6 | - |
| CPUE \geq MLL (10-inches) | - | - | - | - | - | - | - | 7.0 | 104.6 | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | 85.1 | - | - |
| Quality | - | - | - | - | - | - | - | 85.7 | - | - |
| Preferred | - | - | - | - | - | - | - | 87.1 | - | - |
| Memorable | - | - | - | - | - | - | - | 96.3 | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | - | - | - | - | - | - | - | - | - | - |
| #/Acre | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | - | - | - | - | 25,735 | 25,635 | - | - | - | - |
| Angler Hours/Acre | - | - | - | - | 2.2 | 1.8 | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | - | - | - | - | 1.85 | 1.65 | - | - | - | - |
| Harvest Rate (any crappie) | - | - | - | - | 0.59 | 0.47 | - | - | - | - |
| % Released (w hite crappie) | - | - | - | - | 73.6% | 64.2% | - | - | - | - |
| Mean Weight (w hite crappie) | - | - | - | - | 0.86 | 0.76 | - | - | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | - | - | - | - | \$111,020 | \$63,170 | - | - | - | - |

Non-target sample unless otherwise noted.

* - Targeted sample

Black Crappie, Cordell Hull Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014* | 2015* | 2016 |
|-----------------------------------------------------|------|------|------|------|-----------|----------|------|-------|-------|------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (Trap netting) | - | - | - | - | - | - | - | 0.00 | 0.00 | - |
| CPUE (mid-summer seine) | - | - | - | - | - | - | - | 0.50 | 0.10 | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | - | - | - | - | - | - | - | - | 100 | - |
| RSD (preferred) | - | - | - | - | - | - | - | - | 46 | - |
| CPUE (total) | - | - | - | - | - | 0.4 | - | 0.4 | 42.3 | 0.2 |
| CPUE ≥ Stock | - | - | - | - | - | - | - | - | 100.0 | - |
| CPUE ≥ MLL (10-inches) | - | - | - | - | - | - | - | - | 19.2 | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | - | - | - | - | - | - | - |
| Preferred | - | - | - | - | - | - | - | - | - | - |
| Memorable | - | - | - | - | - | - | - | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | - | - | - | - | - | - | - | - | - | - |
| #/Acre | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | - | - | - | - | 25735.0 | 25635.0 | - | - | - | - |
| Angler Hours/Acre | - | - | - | - | 2.2 | 1.8 | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | - | - | - | - | 1.9 | 1.7 | - | - | - | - |
| Harvest Rate (any crappie) | - | - | - | - | 0.6 | 0.5 | - | - | - | - |
| % Released (black crappie) | - | - | - | - | 0.6 | 0.7 | - | - | - | - |
| Mean Weight (black crappie) | - | - | - | - | 0.9 | 0.8 | - | - | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | - | - | - | - | \$111,020 | \$63,170 | - | - | - | - |

Non-target sample unless otherwise noted.

* - Targeted sample

Blacknose Crappie, Cordell Hull Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014* | 2015* | 2016 |
|-----------------------------------------------------|------|------|------|------|-----------|----------|------|-------|-------|------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (Trap netting) | - | - | - | - | - | - | - | 0.00 | - | - |
| CPUE (mid-summer seine) | - | - | - | - | - | - | - | 0.40 | 0.10 | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | - | - | - | - | - | - | - | - | 100 | - |
| RSD (preferred) | - | - | - | - | - | - | - | - | 0 | - |
| CPUE (total) | - | - | - | - | - | 0.6 | - | 0.4 | 15.4 | - |
| CPUE \geq Stock | - | - | - | - | - | - | - | - | 100.0 | - |
| CPUE \geq MLL (10-inches) | - | - | - | - | - | - | - | - | 4.6 | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | - | - | - | - | - | - | - |
| Preferred | - | - | - | - | - | - | - | - | - | - |
| Memorable | - | - | - | - | - | - | - | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | - | - | - | - | - | - | - | - | - | - |
| #/Acre | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | - | - | - | - | 25,735 | 25,635 | - | - | - | - |
| Angler Hours/Acre | - | - | - | - | 2.2 | 1.8 | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | - | - | - | - | 2 | 2 | - | - | - | - |
| Harvest Rate (any crappie) | - | - | - | - | 0.6 | 0.5 | - | - | - | - |
| % Released (blacknose crappie) | - | - | - | - | 1 | 0 | - | - | - | - |
| Mean Weight (blacknose crappie) | - | - | - | - | 0.9 | 0.8 | - | - | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | - | - | - | - | \$111,020 | \$63,170 | - | - | - | - |

Non-target sample unless otherwise noted.

* - Targeted sample

Sauger, Cordell Hull Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|-------|----------|----------|------|------|------|------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (gill netting) | - | - | - | 0.00 | | 0.00 | - | - | - | - |
| CPUE (midsummer seine) | 0.30 | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | - | - |
| Density (gill netting) | | | | | | | | | | |
| PSD | - | - | - | 100.0 | - | - | - | - | - | - |
| RSD (preferred) | - | - | - | 70.0 | - | - | - | - | - | - |
| CPUE (total) | - | - | - | - | - | 0.3 | - | - | - | - |
| CPUE ≥ Stock | - | - | - | - | - | - | - | - | - | - |
| CPUE ≥ MLL (15-inches) | - | - | - | - | - | - | - | - | - | - |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (gill netting) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | - | - | - | - | - | - | - |
| Preferred | - | - | - | - | - | - | - | - | - | - |
| Memorable | - | - | - | - | - | - | - | - | - | - |
| Mortality (gill netting) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | - | - | - | - | - | - | - | - | - | - |
| #/Acre | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel)* | | | | | | | | | | |
| Angler Hours | - | - | - | - | 19,322 | 25,396 | - | - | - | - |
| Angler Hours/Acre | - | - | - | - | 1.62 | 1.82 | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | - | - | - | 0.56 | 0.80 | - | - | - | - |
| Harvest Rate (intended) | - | - | - | - | 0.22 | 0.35 | - | - | - | - |
| % Released | - | - | - | - | 58.2% | 41.1% | - | - | - | - |
| Mean Weight | - | - | - | - | 1.53 | 1.95 | - | - | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Sauger | - | - | - | - | \$82,870 | \$69,380 | - | - | - | - |

Walleye, Cordell Hull Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|------|------|------|------|---------|--------|------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (gill netting) | - | - | - | - | - | - | - | - | - | - |
| CPUE (midsummer seine) | - | - | - | - | - | - | - | 0.10 | - | - |
| Density (gill netting) | | | | | | | | | | |
| PSD | - | - | - | - | - | - | - | - | - | - |
| RSD (preferred) | - | - | - | - | - | - | - | - | - | - |
| CPUE (total) | - | - | - | - | - | - | - | - | - | - |
| CPUE > Stock | - | - | - | - | - | - | - | - | - | - |
| CPUE ≥ MLL (16-inches) | - | - | - | - | - | - | - | - | - | - |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (gill netting) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | - | - | - | - | - | - | - |
| Preferred | - | - | - | - | - | - | - | - | - | - |
| Memorable | - | - | - | - | - | - | - | - | - | - |
| Mortality (gill netting) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | - | - | - | - | - | - | - | 113,835 | 29,223 | - |
| #/Acre | - | - | - | - | - | - | - | 8.2 | 2.1 | - |
| Angling Pressure (creel)* | | | | | | | | | | |
| Angler Hours | - | - | - | - | - | - | - | - | - | - |
| Angler Hours/Acre | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | - | - | - | - | - | - | - | - | - |
| Harvest Rate (intended) | - | - | - | - | - | - | - | - | - | - |
| % Released | - | - | - | - | - | - | - | - | - | - |
| Mean Weight | - | - | - | - | - | - | - | - | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Walleye | - | - | - | - | - | - | - | - | - | - |

Striped Bass, Cordell Hull Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|---------|--------|---------|--------|---------|----------|--------|--------|--------|--------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (gill netting) | - | - | - | - | - | - | - | - | - | - |
| CPUE (mid-summer seine) | - | - | - | 0.1 | 0 | - | 0 | - | - | 0.10 |
| Density (gill netting) | | | | | | | | | | |
| PSD | - | - | - | - | - | - | - | - | - | - |
| RSD (preferred) | - | - | - | - | - | - | - | - | - | - |
| CPUE (total) | - | - | - | - | - | - | - | - | - | - |
| CPUE \geq Stock | - | - | - | - | - | - | - | - | - | - |
| CPUE \geq 15-inches | - | - | - | - | - | - | - | - | - | - |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-2 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (gill netting) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | - | - | - | - | - | - | - |
| Preferred | - | - | - | - | - | - | - | - | - | - |
| Memorable | - | - | - | - | - | - | - | - | - | - |
| Mortality (gill netting) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | 154,772 | 60,168 | 119,185 | 92,205 | 81,977 | 107,825 | 75,559 | 86,015 | 47,161 | 65,918 |
| #/Acre | 11.12 | 4.32 | 8.56 | 6.62 | 5.89 | 7.75 | 5.43 | 6.17 | 3.40 | 5.51 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | - | - | - | - | 364 | 2,495 | - | - | - | - |
| Angler Hours/Acre | - | - | - | - | 0.03 | 0.18 | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | - | - | - | 0.87 | 0.00 | - | - | - | - |
| Harvest Rate (intended) | - | - | - | - | 0.49 | 0.00 | - | - | - | - |
| % Released | - | - | - | - | 30.5% | 100.0% | - | - | - | - |
| Mean Weight | - | - | - | - | 4.95 | - | - | - | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Striped Bass | - | - | - | - | \$3,840 | \$14,200 | - | - | - | - |

Catfish, Cordell Hull Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|------|----------|----------|------|------|------|------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all catfish) | - | - | - | - | 5,169 | 5,689 | - | - | - | - |
| Angler Hours/Acre | - | - | - | - | 0.43 | 0.41 | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any catfish) | - | - | - | - | 0.10 | 0.16 | - | - | - | - |
| Harvest Rate (any catfish) | - | - | - | - | 0.10 | 0.16 | - | - | - | - |
| % Released (channel) | - | - | - | - | 9.1% | 0.0% | - | - | - | - |
| Mean Weight (channel) | - | - | - | - | 1.92 | 1.89 | - | - | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Catfish | - | - | - | - | \$19,960 | \$20,020 | - | - | - | - |

Bluegill, Cordell Hull Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|-------|----------|----------|------|------|------|------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (Trap netting) | - | - | - | - | - | - | - | 6.3 | 0.9 | - |
| CPUE (mid-summer seine) | 48.6 | 13.9 | 9.8 | 107.3 | 8.3 | 30.8 | 22.9 | 56.9 | 87.4 | 30.6 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all sunfish) | - | - | - | - | 5,311 | 13,379 | - | - | - | - |
| Angler Hours/Acre | - | - | - | - | 0.44 | 0.96 | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any sunfish) | - | - | - | - | 2.65 | 1.25 | - | - | - | - |
| Harvest Rate (any sunfish) | - | - | - | - | 0.90 | 0.90 | - | - | - | - |
| % Released (bluegill) | - | - | - | - | 78.2% | 23.1% | - | - | - | - |
| Mean Weight (bluegill) | - | - | - | - | 0.30 | 0.29 | - | - | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Sunfish | - | - | - | - | \$28,000 | \$40,050 | - | - | - | - |

Shad, Cordell Hull Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------|------|------|------|------|------|------|------|-------|------|------|
| Density (electrofishing) | | | | | | | | | | |
| Alewife CPUE | - | - | - | - | - | - | - | - | - | - |
| Gizzard CPUE | - | 89.5 | - | - | - | 21.3 | - | 119.2 | - | 84.7 |
| Threadfin CPUE | - | 30.9 | - | - | - | 6.3 | - | 13.2 | - | 0.6 |

Habitat Enhancement, Cordell Hull Reservoir

| Type of Work | Details | Quantity | |
|----------------|---------|----------|-----------|
| | | New | Renovated |
| none performed | | | |

Water Quality Monitoring, Cordell Hull Reservoir

| Parameter | Sampling Period | Water Quality |
|------------------|-----------------|---------------|
| Temperature | none taken | none taken |
| Dissolved Oxygen | none taken | none taken |
| PH | none taken | none taken |
| Conductivity | none taken | none taken |

Dale Hollow Reservoir (2016 Annual Report)

Description

Area (acres): 27,700 **Mean Depth (feet):** **Shoreline (miles):** 620

Counties: Clay, Pickett, Overton, and Fentress Counties, TN also in Clinton and Cumberland Counties, KY.

Full Pool Elevation (feet-msl): 651 **Winter Pool Elevation (feet-msl):** 631

Dam Completion: 1943

Summary:

Dale Hollow Reservoir was created in 1943 by the completion of Dale Hollow Dam on the Obey River near Celina, TN. Dale Hollow has 27,700 surface acres of water with 620 miles of shoreline. The operating authority is the U.S. Corp of Engineers. Dale Hollow reservoir encompasses Clay, Pickett, Overton, and Fentress counties in Tennessee and also Clinton and Cumberland counties in Kentucky. Dale Hollow has long been home to the famous state record (and world record) smallmouth bass caught in 1955 by Mr. D. L. Hayes which weighed 11lbs. and 15 ounces. This world class smallmouth bass continues to captivate the thoughts of anglers in regards to the reality and possibilities of what a great smallmouth bass fishery exists at Dale Hollow.

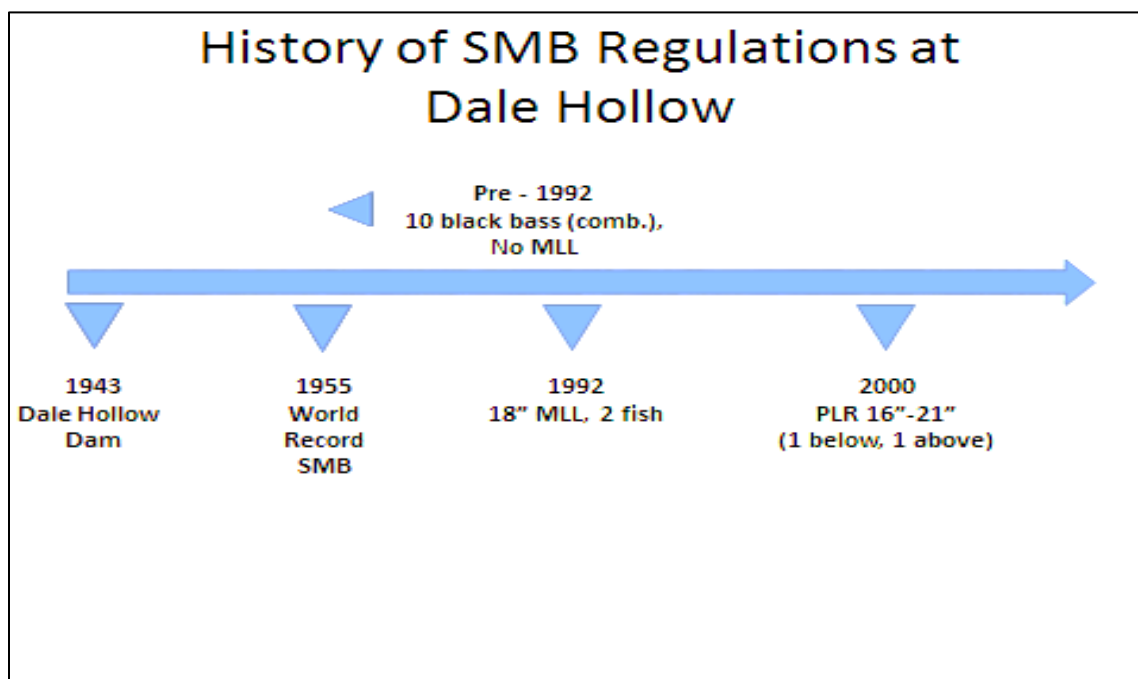
Largemouth bass (LMB): Fishing success for largemouth bass has remained stable over the past years at Dale Hollow. There have been several reports of good stringers and nice sized LMB being weighed in at tournaments conducted at Dale Hollow Reservoir over the past couple of years. According to creel surveys in 2013, catch rates for LMB by anglers were the highest in the past ten years at an average catch rate of 0.86 lmb/hour. That same catch rate dropped to 0.47 in 2015 and 0.31 in 2016. The average weight of harvested LMB in 2015 was 2.85 lbs. and 2.68 lbs. in 2016. The presence of various species of aquatic vegetation and available forage have greatly contributed in promoting and sustaining this fishery. Of concern through the years are the high values for PSD and RSD 15 values for LMB in Dale Hollow Reservoir which indicates a population heavily weighted by larger fish and possible recruitment problems. This unbalance as displayed by PSD and RSD values has been consistent in Dale Hollow over the past three decades. Results from the spring electrofishing surveys for LMB at Dale Hollow in 2015 were exceptional on many facets; the overall CPUE for LMB was 32.9 lmb/hour, this was the highest in the past ten years as was also the CPUE (23.3 lmb/hour) for LMB ≥ 15 ", the minimum length limit (MLL) for LMB at Dale Hollow. Substock CPUE (2015) was also the highest in the past ten years with a value of 1.37 lmb/hour. Spring electrofishing surveys are typically conducted every other year at Dale Hollow, therefore the next such data collection is scheduled for 2017. Of interest is also the data from the mid-summer seining surveys which are used to aid in evaluation of spawning success. In 2009, the highest recorded of 1.5 lmb/seine haul was recorded which was likely the large year class that has shown up in the past couple of years in creel surveys and tournament results. In 2015, this same data survey showed a value of 1.2 lmb/seine haul which is the third highest in the past ten years but a low of 0.10 lmb seine haul in 2016. Hopefully the right ingredients will remain in place to facilitate these large year classes of LMB in successful spawning endeavors which would contribute greatly to the LMB fishery at Dale Hollow.

Smallmouth bass (SMB): Nearly seventy five years after Dale Hollow reservoir was created it continues to be a destination for many anglers, both in and out of state, who are in pursuit of great SMB fishing

opportunities. Smallmouth bass anglers at Dale Hollow consistently reveal their long time commitment and support of the smallmouth bass fishery at Dale Hollow. Creel surveys lend evidence to this fact. It was estimated, through roving creel interviews conducted in 2016, that anglers spent \$1,131,820 in trip expenditures and consumer surplus combined in the pursuit of SMB at Dale Hollow reservoir.

As with any species among varying reservoirs, the success of the SMB population at Dale Hollow is dependent upon a multitude of circumstances and influences, some of which are controllable (E.g. fishing regulations) and some of which are not (E.g. environmental factors, fishing pressure). Only three major smallmouth bass fishing regulations have governed this fishery at Dale Hollow since the reservoir was created (See chart below).

Listed below are the regulation installations regarding smallmouth bass management at Dale Hollow:



Listed below are the most notable events regarding SMB regulations at Dale Hollow:

- **Pre 1992:** 10 black bass in combo (spotted bass, smallmouth bass, largemouth bass), No minimum length limit (MLL)
- **1986:** Special survey conducted at the request of some of the Dale Hollow boat dock owners concerning the imposition of an 18 inch minimum size limit for largemouth and smallmouth bass. Of 805 fishermen that were interviewed, 675 (83.9%) were opposed to the 18" minimum size limit and 130 (16.1%) were in favor of the proposal, thus no action was taken on the 18" minimum size limit.
- **1992:** Due to changes in the SMB population and public opinion, a new SMB regulation of 2 fish/18" minimum was implemented. A public survey showed a majority support with 69.7% of creel fishermen between March 1, 1991 to September 30, 1991 supported this regulation. Also, a petition delivered to the Region 3 office on September 16, 1991 had ~800 signatures in support of this regulation citing a decrease in "6 lb." size bass (largemouth and smallmouth) because of

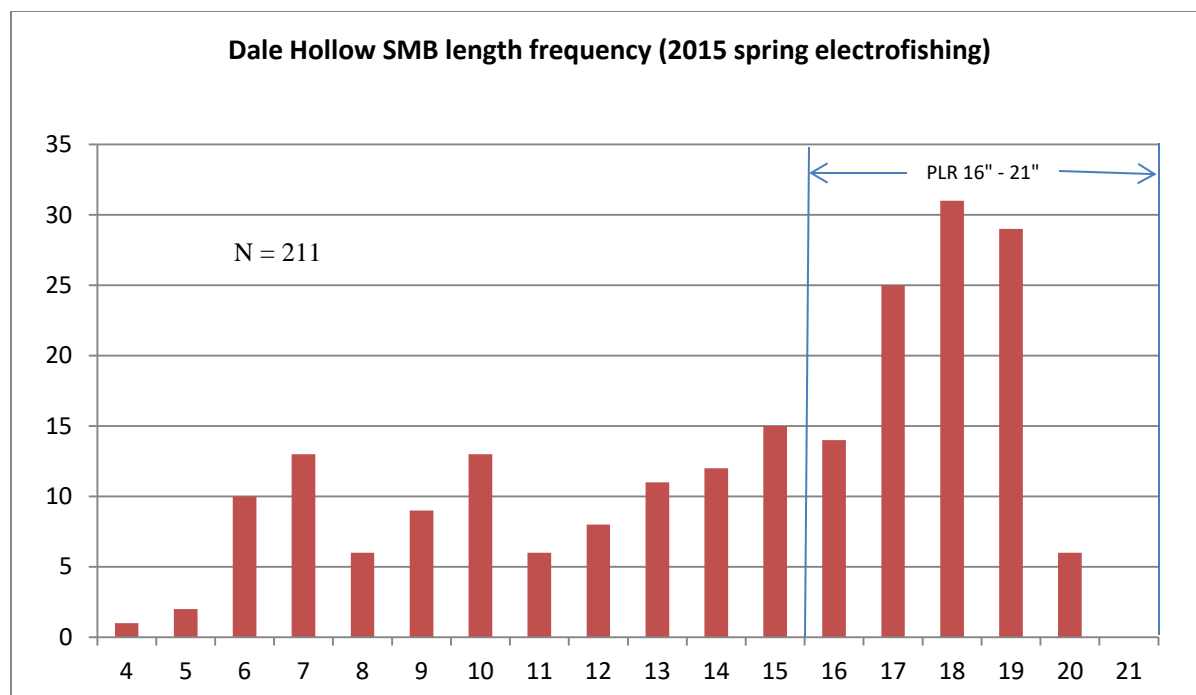
presumed “heavy fishing pressure”. The original proposal by TWRA was 1 SMB per day/18” minimum.

- **2000:** SMB protected length limit (PLR, Protected Length Range 16-21” allow one fish below 16” and one fish above 21”) was implemented. This regulation is still in place today (2016). The 18” minimum size limit that was established in 1992 had worked well but currently was not protecting enough fish with several being harvested once they exceeded the 18” minimum length limit. Increased fishing pressure at Dale Hollow reservoir on the SMB resource was having a big impact. This new protected slot limit offered protection for a wider class of quality and trophy SMB while also protecting the best spawners.

The current protected length limit (PLR) has and continues to accomplish what it was intended to do; which is to protect SMB between 16 and 21 inches from harvest while still allowing these fish to be caught by anglers and released. Prior to the current PLR, the 18” minimum/ 2 SMB day regulation (existing in the years 1992-2000) was showing signs that not enough SMB over 18” were available for angling opportunities. This was most likely due to the harvest (i.e. tournament mortality & consumption) of SMB by anglers once the SMB surpassed the 18 inch minimum size. The impact on the SMB resource became greater as SMB fishing pressure increased at Dale Hollow. Additionally, studies carried out in Tennessee have shown that SMB are much more susceptible to mortality associated with angling induced stress as compared to other black bass species like largemouth and spotted bass. This fact again illustrates the importance and some of the challenges associated with the management of SMB. It is also worth noting that the current PLR regulation at Dale Hollow would provide an increased protection in the event that Alabama bass were illegally introduced to Dale Hollow. Alabama bass have been realized in other TN reservoirs within Region 3 (E.g. Parksville, Watts Bar & Nickajack). Alabama bass would have dire consequences on native SMB populations as has been observed in northern Georgia reservoirs were this scene unfolded.

A documented fish kill occurred in 2012 at Dale Hollow, most likely due to record drought conditions, which affected several species of gamefish including SMB. The resiliency of the SMB population and rebound of smallmouth bass between 16 and 21 inches after this kill could in part be attributed to the protection of adult SMB by the current PLR regulation who were able to contribute good numbers of year classes the following years

Smallmouth bass fishing on Dale Hollow Reservoir continues to offer some of the best opportunities anywhere. According to the creel surveys conducted in 2016, catch rates for anglers were 0.32 smb/hour, which is about average for Dale Hollow. The mid-summer seining surveys in 2013 yielded a 10 year high with a catch rate of 2.20 smb/seine haul, this same value was half that in 2015 (1.10 smb/seine haul) and down further in 2016 to 1.00 smb/seine haul. A targeted and regular spring electrofishing survey was conducted in 2015. From these surveys, CPUE for sub stock size smallmouth bass were the highest in ten years at 2.20 smb/hour. The size structure of smallmouth bass in Dale Hollow observed in 2013 electrofishing surveys offers great promise for strong year classes entering the 16-21” protected length range (PLR) currently in place at Dale Hollow. This SMB PLR regulation with a creel limit of 1 SMB allowed above 21” and one SMB allowed below 16” was instituted at Dale Hollow in the year 2000. Prior to this PLR, the regulation for SMB at Dale Hollow was an 18” MLL, 2 fish creel which was established in 1992. The graph below shows an abundance of SMB, collected during both targeted and regular spring electrofishing surveys in 2015, inside the PLR. This is a good illustration of the PLR achieving what it was intended to do. Also, the condition factors (Wrs) for all size classes of SMB observed were satisfactory.



Anglers at Dale Hollow Reservoir in pursuit of smallmouth bass spent an estimated \$697,070 on trip expenditures alone according to 2016 annual roving creel surveys. A small targeted sample of smallmouth bass was collected in the spring of 2016 (see Table below). However, it is felt that due to warming temperatures that the timing of this targeted sample was too late to capture large numbers of fish via electrofishing. More targeted SMB surveys will be conducted in the future.

Spotted bass (SPB): Catch rates for spotted bass obtained from creel surveys show that mean weight (1.16 lbs.) for harvested spotted bass was the lowest when compared to the last ten years at Dale Hollow. In 2016 this average weight was again low at 1.20 lbs. There is no minimum length limit on spotted bass currently at Dale Hollow. There are no reasons perceived that prevent the spotted bass fishery from offering consistent success as in years past. However, observations show that the quality and quantity of spotted bass in Dale Hollow have decreased over the past ten years although overall catch rates are fairly level. Catch rates for young of year spotted bass from summer seining efforts in 2015 showed a catch rate of 1.5 spb/seine haul which is the second lowest recorded in the last ten years and even lower to 0.90 spb/seine haul in 2016. Not enough spotted bass were captured during the 2015 spring electrofishing surveys to generate any reputable data. Increased evaluations of the spotted bass population at Dale Hollow may be warranted in the near future.

Crappie: White crappie populations in Dale Hollow Reservoir are not as prevalent as the black crappie populations, including blacknose crappie. Blacknose crappies (BNC) are stocked annually by TWRA into Dale Hollow. According to past surveys, white crappie was the dominant species of crappie in Dale Hollow in the early 1970's but is currently dominated by black crappie. It is estimated that crappie anglers expended an estimated \$75,450 in 2016 on Dale Hollow Reservoir in pursuit of crappie. According to those same creel surveys conducted in 2015, the catch rates by anglers for crappie were at a rate of 0.43 crappie/hour which is the lowest in the past ten years but bounced up to 1.12 crappie/hour in 2016. Crappie spawning success is very limited on Dale Hollow and that is not expected to change. Fall trapnetting is not a viable form of sampling due to the steep banks that are representative of Dale Hollow.

Conclusive evidence throughout the years exists for poor crappie recruitment at Dale Hollow. Harvest reports obtained by roving creel surveys also reflect very poor consistency with crappie year classes. Crappie fishing success on Dale Hollow is expected to remain consistent however thanks to the continued annual stocking program of blacknose crappie by TWRA.

Redear sunfish: Fishing success for redear sunfish on Dale Hollow Reservoir remains good with some very nice fish being caught every year around the month of May. Reports with pictures from fishermen confirm the quality of the redear fishery here, often catching redear sunfish around and exceeding the one pound size. According to creel surveys; harvest rates and mean weights (0.55 lb. in 2016) associated with redear sunfish remain near average when compared to the last ten years. Catch rates by anglers showed an increase according to our creel surveys in 2014 and again in 2015 at 2.93 redear caught/hour. However in 2016 redear catch rates by anglers decreased to 1.49 redear/hour.

Bluegill: Fishing success for bluegill should continue to be promising in Dale Hollow Reservoir. Mid-summer seining surveys showed low reproduction of bluegill in 2015 at 1.60 bluegill/seine haul, the lowest in the ten year average. In 2016, these same surveys showed a catch rate of 4.40 bluegill/seine haul which is about average for Dale Hollow over the past ten years. Catch rates and harvest rates for “any sunfish” (mainly bluegill and redear sunfish) by anglers remain consistent according to annual roving creel surveys.

Walleye: The creel surveys in 2016 indicate that there was an estimated \$62,050 dollars expended by walleye anglers on Dale Hollow Reservoir. This economic figure is below the ten year average. Catch rates for walleye in 2015 were the second lowest recorded in the past ten years according to creel surveys at a rate of 0.16 walleye/hour closely followed by a catch rate of 0.15 walleye/hour in 2016. The average weight of harvested walleye was 3.99 lbs. in 2016. Annual stockings of walleye have promoted consistency by enhancing successful year classes of walleye at Dale Hollow. In 2016, TWRA stocked 190,857 (8.2/acre) walleye fingerlings into Dale Hollow which is more than the typical 5 walleye/acre stocking rate. Hopefully with some natural reproduction realized from walleye populations and additional enhancement with stockings, fishing success in Dale Hollow should remain very good for walleye. Also ample forage bases comprised of threadfin and gizzard shad as well as alewife await walleye. Walleye support a very important fishery at Dale Hollow which is utilized throughout the year.

Catfish: Anglers in pursuit of catfish in Dale Hollow Reservoir compromise a smaller percentage of the intended angling public there. The overall success for catfish harvest remains consistent at Dale Hollow. The average weight of catfish captured in the 2015 creel survey was 5.00 lbs. which is the average size as compared to the past ten years. Angling pressure for catfish is low when compared to other game fish within this reservoir.

Muskie: TWRA records show that TWRA personnel stocked “several” musky into Dale Hollow Reservoir between the years of 1952-1958 that were relocated from naturally occurring streams in Tennessee. Additionally, from 1958-1965 more musky were stocked into Dale Hollow that were acquired from Wisconsin. Despite there not being any other records of musky stockings at Dale Hollow since these reports, musky still exist in Dale Hollow today thus indicating a limited population existing by natural reproduction. Reports of anglers catching musky (typically large) do surface, typically caught while fishing for other species (i.e. trolling for walleye), and TWRA fisheries personnel have encounters via electrofishing from time to time with musky, but not often. Due to the small representation of musky at Dale Hollow, very little is known about population size, habitat preference and preferred spawning locations.

Lakewide Angling Summary

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Angling Pressure | | | | | | | | | | |
| Angler Hours | 380,868 | 335,407 | 376,584 | 334,592 | 353,631 | 368,307 | 298,648 | 283,231 | 269,329 | 275,005 |
| Angler Hours Per Acre | 16.5 | 14.6 | 16.3 | 14.4 | 15.1 | 16 | 12.8 | 12.2 | 11.6 | 11.9 |
| Angler Trips | 61,059 | 52,750 | 60,319 | 52,744 | 56,777 | 59,434 | 46,463 | 45,441 | 41,113 | 41,725 |
| Value of Fishery (angler expenditures creel) | | | | | | | | | | |
| All Species | 3,479,300 | 2,954,030 | 2,803,660 | 2,309,480 | 2,833,440 | 2,859,300 | 2,422,100 | 2,340,910 | 1,561,830 | 1,411,500 |

Black bass, Dale Hollow Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Angling Pressure | | | | | | | | | | |
| All Black Bass (hrs) | 235,115 | 216,960 | 233,738 | 205,517 | 223,261 | 189,256 | 162,233 | 164,986 | 165,119 | 187,472 |
| (hrs/acre) | 10.13 | 9.35 | 10.08 | 8.86 | 9.62 | 8.16 | 6.99 | 7.11 | 7.12 | 8.10 |
| Any Black Bass (hrs) | 73,017 | 69,658 | 80,698 | 67,753 | 84,840 | 77,442 | 70,785 | 73,491 | 76,303 | 84,906 |
| (hrs/acre) | 3.15 | 3.00 | 3.48 | 2.92 | 3.66 | 3.34 | 3.05 | 3.17 | 3.29 | 3.70 |
| Largemouth Bass (hrs) | 2,295 | 2,736 | 1,676 | 1,872 | 4,399 | 2,407 | 3,669 | 7,889 | 6,240 | 3,347 |
| (hrs/acre) | 0.10 | 0.12 | 0.07 | 0.08 | 0.19 | 0.10 | 0.16 | 0.34 | 0.27 | 0.14 |
| Smallmouth Bass (hrs) | 159,490 | 144,566 | 151,266 | 135,722 | 133,899 | 109,407 | 87,779 | 83,042 | 82,576 | 99,219 |
| (hrs/acre) | 6.88 | 6.23 | 6.52 | 5.85 | 5.77 | 4.72 | 3.78 | 3.58 | 3.56 | 4.28 |
| Spotted Bass (hrs) | 313 | - | 98 | 170 | 123 | - | - | 564 | - | - |
| (hrs/acre) | 0.01 | - | 0.00 | 0.01 | 0.01 | - | - | 0.02 | - | - |
| Tournaments (all black bass) | | | | | | | | | | |
| # Tournaments (BITE) | | | | | | | | | | |
| Pounds/Angler Day (BITE) | | | | | | | | | | |
| Bass/Angler Day (BITE) | | | | | | | | | | |
| Tournament Angler Hrs/Acre (creel) | | | | | | | | | | |
| Tournament Catch Rate (creel) | 0.38 | 0.33 | 0.18 | 0.38 | 0.62 | 0.49 | 0.53 | 0.67 | 0.62 | 0.35 |
| Non-Tournament Catch Rate (creel) | 0.47 | 0.30 | 0.29 | 0.39 | 0.51 | 0.47 | 0.33 | 0.44 | 0.38 | 0.35 |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| All Black Bass | \$1,588,010 | \$2,267,080 | \$2,123,640 | \$1,688,400 | \$2,138,230 | \$1,197,550 | \$1,125,410 | \$1,132,180 | \$1,235,620 | \$1,152,390 |
| Any Black Bass | \$444,800 | \$751,010 | \$678,140 | \$444,780 | \$683,980 | \$413,300 | \$451,700 | \$404,960 | \$558,230 | \$430,970 |
| Largemouth Bass | \$15,950 | \$24,400 | \$7,070 | \$14,530 | \$17,090 | \$11,000 | \$13,270 | \$47,660 | \$27,990 | \$24,350 |
| Smallmouth Bass | \$1,126,270 | \$1,491,670 | \$1,437,840 | \$1,228,100 | \$1,433,300 | \$773,250 | \$660,440 | \$679,010 | \$649,400 | \$697,070 |
| Spotted Bass | \$990 | - | \$590 | \$990 | \$3,860 | - | | \$550 | - | - |

Largemouth Bass, Dale Hollow Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (spring electrofishing) | 0.20 | - | 0.00 | - | - | - | - | - | 1.37 | - |
| CPUE (mid-summer seine) | 0.20 | 0.60 | 1.50 | 0.80 | 0.40 | 0.00 | 1.30 | 0.40 | 1.20 | 0.10 |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | 84.0 | - | 95.0 | - | - | - | 91.0 | - | 95.0 | - |
| RSD (preferred) | 47.0 | - | 68.0 | - | - | - | 61.0 | - | 73.9 | - |
| CPUE (total) | 15.0 | - | 3.8 | - | - | - | 24.6 | - | 32.9 | - |
| CPUE \geq Stock | 14.8 | - | 3.8 | - | - | - | 24.6 | - | 31.6 | - |
| CPUE \geq MLL (15-inches) | 6.8 | - | 2.6 | - | - | - | 18.5 | - | 23.3 | - |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 96.6 | - | - | - | - | - | 98.1 | - | 114.6 | - |
| Quality | 129.5 | - | - | - | - | - | 90.2 | - | 94.3 | - |
| Preferred | 94.3 | - | - | - | - | - | 88.7 | - | 92.2 | - |
| Memorable | 89.0 | - | - | - | - | - | 66.6 | - | 87.0 | - |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate, num./hr (intended) | 0.67 | 0.35 | 0.42 | 0.41 | 0.39 | 0.22 | 0.86 | 0.75 | 0.47 | 0.31 |
| Catch Rate, num./hr (any black bass) | 0.46 | 0.33 | 0.29 | 0.42 | 0.49 | 0.42 | 0.52 | 0.68 | 0.54 | 0.27 |
| Harvest Rate, num./hr (any black bass) | 0.11 | 0.10 | 0.06 | 0.05 | 0.09 | 0.07 | 0.07 | 0.16 | 0.12 | 0.06 |
| % Released | 74.2% | 77.1% | 78.1% | 89.1% | 88.3% | 81.0% | 83.6% | 80.2% | 79.9% | 69.2% |
| Mean Weight | 2.81 | 2.70 | 2.73 | 3.08 | 2.57 | 2.74 | 2.60 | 2.59 | 2.85 | 2.68 |

Smallmouth Bass, Dale Hollow Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (spring electrofishing) | 1.20 | - | 1.60 | | | | 0.95 | - | 2.20 | - |
| CPUE (mid-summer seine) | 1.40 | 1.40 | 0.70 | 1.60 | 1.90 | 0.40 | 2.20 | 0.90 | 1.10 | 1.00 |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | 61.0 | - | 80.0 | - | - | - | 72.0 | - | 64.7 | - |
| RSD (preferred) | 23.0 | - | 58.0 | - | - | - | 53.0 | - | 45.5 | - |
| CPUE (preferred) | - | - | 5.8 | - | - | - | 3.1 | - | 1.8 | - |
| CPUE (total) | 14.6 | - | 11.6 | - | - | - | 23.8 | - | 21.6 | - |
| CPUE \geq Stock | 13.2 | - | 10.0 | - | - | - | 22.9 | - | 19.4 | - |
| CPUE \geq Preferred | - | - | - | - | - | - | 11.1 | - | 8.8 | - |
| CPUE \geq MLL (18-inches) | - | - | - | - | - | - | 1.9 | - | 2.4 | - |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | 274.0 | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 89.3 | - | - | - | - | - | 96.2 | - | 112.2 | - |
| Quality | 92.4 | - | - | - | - | - | 82.1 | - | 88.9 | - |
| Preferred | 91.2 | - | - | - | - | - | 78.0 | - | 81.9 | - |
| Memorable | 87.4 | - | - | - | - | - | 77.7 | - | 77.9 | - |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | 41.0% | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate, num./hr (intended) | 0.46 | 0.33 | 0.29 | 0.36 | 0.50 | 0.46 | 0.25 | 0.39 | 0.41 | 0.32 |
| Catch Rate, num./hr (any black bass) | 0.46 | 0.33 | 0.29 | 0.42 | 0.49 | 0.42 | 0.52 | 0.68 | 0.54 | 0.27 |
| Harvest Rate, num./hr (any black bass) | 0.11 | 0.10 | 0.06 | 0.05 | 0.01 | 0.07 | 0.07 | 0.16 | 0.12 | 0.06 |
| % Released | 74.2% | 77.1% | 96.9% | 95.3% | 95.8% | 94.3% | 95.1% | 97.4% | 97.6% | 97.9% |
| Mean Weight | 2.81 | 2.70 | 2.44 | 2.34 | 1.82 | 2.00 | 1.62 | 2.14 | 2.03 | 1.85 |

Smallmouth Bass (Targeted), Dale Hollow Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-------------------------------------|------|------|------|------|------|------|-------|------|-------|------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | | | | | 0.54 | - | 0.95 | - | 0.30 | 2.02 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | | | | | 94 | - | 85 | - | 94 | 95 |
| RSD (preferred) | | | | | 70.0 | - | 52.0 | - | 87.9 | 81.0 |
| CPUE (preferred) | | | | | 6.4 | - | 2.4 | - | 0.4 | 1.6 |
| CPUE (total) | | | | | 9.2 | - | 29.4 | - | 13.3 | 2.48 |
| CPUE ≥ Stock | | | | | 9.2 | - | 28.4 | - | 13.0 | 25.4 |
| CPUE ≥ Preferred | | | | | 6.4 | - | 14.4 | - | 11.5 | 20.6 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | - | - | - | - | - | - |
| Length Age-3 | | | | | - | - | 277.0 | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | | | | | 95.4 | - | 81.5 | - | 118.4 | 88.5 |
| Quality | | | | | 92.0 | - | 81.8 | - | 87.9 | 87.3 |
| Preferred | | | | | 94.7 | - | 87.8 | - | 92.3 | 89.4 |
| Memorable | | | | | 95.1 | - | 86.8 | - | 85.7 | 88.8 |

Spotted Bass, Dale Hollow Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (spring electrofishing) | 0.60 | - | 1.20 | - | - | - | - | - | - | - |
| CPUE (mid-summer seine) | 1.70 | 4.80 | 1.70 | 1.70 | 2.90 | 0.00 | 3.40 | 2.00 | 1.50 | 0.90 |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | 70.0 | - | 12.0 | - | - | - | - | - | - | - |
| RSD (preferred) | 29.0 | - | 5.0 | - | - | - | - | - | - | - |
| CPUE (total) | 13.5 | - | 7.8 | - | - | - | 4.4 | - | - | - |
| CPUE \geq Stock | 11.8 | - | 6.8 | - | - | - | - | - | - | - |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 100.5 | - | - | - | - | - | - | - | - | - |
| Quality | 103.7 | - | - | - | - | - | - | - | - | - |
| Preferred | 101.3 | - | - | - | - | - | - | - | - | - |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate, num./hr (intended) | 1.79 | N/A | 0.00 | 0.33 | 5.56 | N/A | N/A | 0.56 | - | - |
| Catch Rate, num./hr (any black bass) | 0.46 | 0.33 | 0.29 | 0.42 | 0.49 | 0.42 | 0.52 | 0.68 | 0.54 | 0.27 |
| Harvest Rate, num./hr (any black bass) | 0.11 | 0.10 | 0.06 | 0.05 | 0.09 | 0.07 | 0.07 | 0.16 | 0.12 | 0.06 |
| % Released | 74.2% | 77.1% | 64.3% | 67.7% | 69.5% | 55.6% | 79.8% | 72.9% | 78.1% | 74.9% |
| Mean Weight | 2.81 | 2.70 | 1.55 | 1.28 | 1.38 | 1.36 | 1.48 | 1.30 | 1.16 | 1.20 |

Black Crappie, Dale Hollow Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|-----------|----------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | - | - | - | - | - | - | - | - | - | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | - | - | - | - | - | - | - | - | - | - |
| RSD (preferred) | - | - | - | - | - | - | - | - | - | - |
| CPUE (total) | - | - | - | - | - | - | - | - | - | - |
| CPUE \geq Stock | - | - | - | - | - | - | - | - | - | - |
| CPUE \geq MLL (10-inches) | - | - | - | - | - | - | - | - | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | - | - | - | - | - | - | - |
| Preferred | - | - | - | - | - | - | - | - | - | - |
| Memorable | - | - | - | - | - | - | - | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | - | - | - | - | - | - | - | - | - | - |
| #/Acre | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 39,224 | 32,267 | 33,847 | 43,254 | 44,467 | 41,981 | 26,502 | 30,968 | 33,702 | 28,425 |
| Angler Hours/Acre | 1.69 | 1.39 | 1.46 | 1.86 | 1.92 | 1.81 | 1.14 | 1.34 | 1.45 | 1.23 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 0.96 | 0.89 | 0.83 | 1.08 | 1.61 | 1.01 | 1.06 | 0.86 | 0.43 | 1.12 |
| Harvest Rate (any crappie) | 0.55 | 0.33 | 0.45 | 0.39 | 0.57 | 0.39 | 0.38 | 0.44 | 0.15 | 0.46 |
| % Released (black crappie) | 23.2% | 56.7% | 35.9% | 44.5% | 58.7% | 60.4% | 67.7% | 37.8% | 72.7% | 43.0% |
| Mean Weight (black crappie) | 1.06 | 1.00 | 1.16 | 1.00 | 0.98 | 1.06 | 0.94 | 0.95 | 1.01 | 0.85 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | \$175,720 | \$183,200 | \$144,230 | \$196,230 | \$229,760 | \$131,770 | \$91,450 | \$99,790 | \$100,480 | \$75,450 |

Non-target sample unless otherwise noted.

Blacknose Crappie, Dale Hollow Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|-----------|----------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | - | - | - | - | - | - | - | - | - | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | - | - | - | - | - | - | - | - | - | - |
| RSD (preferred) | - | - | - | - | - | - | - | - | - | - |
| CPUE (total) | - | - | - | - | - | - | - | - | - | - |
| CPUE > Stock | - | - | - | - | - | - | - | - | - | - |
| CPUE > MLL (10-inches) | - | - | - | - | - | - | - | - | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | - | - | - | - | - | - | - |
| Preferred | - | - | - | - | - | - | - | - | - | - |
| Memorable | - | - | - | - | - | - | - | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | 241,584 | 169,318 | 257,613 | 182,571 | 106,580 | 127,766 | 179,636 | 213,110 | 161,442 | 178,421 |
| #/Acre | 8.7 | 6.1 | 9.3 | 6.6 | 3.8 | 4.6 | 6.5 | 7.7 | 5.8 | 7.7 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 39,224 | 32,267 | 33,847 | 43,254 | 44,467 | 41,981 | 26,502 | 30,968 | 33,702 | 28,425 |
| Angler Hours/Acre | 1.69 | 1.39 | 1.46 | 1.86 | 1.92 | 1.81 | 1.14 | 1.34 | 1.45 | 1.23 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 0.96 | 0.89 | 0.83 | 1.08 | 1.61 | 1.01 | 1.06 | 0.86 | 0.43 | 1.12 |
| Harvest Rate (any crappie) | 0.55 | 0.33 | 0.45 | 0.39 | 0.57 | 0.39 | 0.38 | 0.44 | 0.15 | 0.46 |
| % Released (blacknose crappie) | 26.9% | 54.9% | 42.1% | 52.5% | 56.8% | 39.0% | 48.4% | 36.7% | 55.2% | 28.4% |
| Mean Weight (blacknose crappie) | 1.18 | 1.27 | 1.28 | 1.19 | 0.98 | 1.09 | 0.96 | 1.11 | 1.40 | 0.88 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | \$175,720 | \$183,200 | \$144,230 | \$196,230 | \$229,760 | \$131,770 | \$91,450 | \$99,790 | \$100,480 | \$75,450 |

Non-target sample unless otherwise noted.

White Crappie, Dale Hollow Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|-----------|----------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | - | - | - | - | - | - | - | - | - | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | - | - | - | - | - | - | - | - | - | - |
| RSD (preferred) | - | - | - | - | - | - | - | - | - | - |
| CPUE (total) | - | - | - | - | - | - | - | - | - | - |
| CPUE \geq Stock | - | - | - | - | - | - | - | - | - | - |
| CPUE \geq MLL (10-inches) | - | - | - | - | - | - | - | - | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | - | - | - | - | - | - | - |
| Preferred | - | - | - | - | - | - | - | - | - | - |
| Memorable | - | - | - | - | - | - | - | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | - | - | - | - | - | - | - | - | - | - |
| #/Acre | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 39,224 | 32,267 | 33,847 | 43,254 | 44,467 | 41,981 | 26,502 | 30,968 | 33,702 | 28,425 |
| Angler Hours/Acre | 1.69 | 1.39 | 1.46 | 1.86 | 1.92 | 1.81 | 1.14 | 1.34 | 1.45 | 1.23 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 0.96 | 0.89 | 0.83 | 1.08 | 1.61 | 1.01 | 1.06 | 0.86 | 0.43 | 1.12 |
| Harvest Rate (any crappie) | 0.55 | 0.33 | 0.45 | 0.39 | 0.57 | 0.39 | 0.38 | 0.44 | 0.15 | 0.46 |
| % Released (w hite crappie) | 56.0% | - | 40.8% | 63.9% | 86.3% | 62.1% | 100.0% | 100.0% | 38.0% | 64.8% |
| Mean Weight (w hite crappie) | 1.02 | - | 1.00 | 0.81 | 0.78 | 0.86 | - | - | 0.86 | 0.59 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | \$175,720 | \$183,200 | \$144,230 | \$196,230 | \$229,760 | \$131,770 | \$91,450 | \$99,790 | \$100,480 | \$75,450 |

Non-target sample unless otherwise noted.

Walleye, Dale Hollow Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|----------|----------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (gill netting) | 0.01 | - | - | - | - | 0.00 | - | - | - | - |
| CPUE (mid-summer seine) | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | 0.00 | - | - | - | - |
| Density (gill netting) | | | | | | | | | | |
| PSD | - | - | - | - | - | 100 | - | - | - | - |
| RSD (preferred) | 23 | - | - | - | - | 60 | - | - | - | - |
| CPUE (total) | 0.8 | - | - | - | - | 0.8 | - | - | - | - |
| CPUE ≥ Stock | 0.8 | - | - | - | - | 0.8 | - | - | - | - |
| CPUE ≥ MLL (16-inches) | 0.8 | - | - | - | - | 0.8 | - | - | - | - |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (gill netting) | | | | | | | | | | |
| Stock | 99.7 | - | - | - | - | 98.9 | - | - | - | - |
| Quality | 101.0 | - | - | - | - | 97.8 | - | - | - | - |
| Preferred | 99.8 | - | - | - | - | 99.7 | - | - | - | - |
| Memorable | 99.1 | - | - | - | - | 93.2 | - | - | - | - |
| Mortality (gill netting) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | 449,439 | 277,368 | 370,917 | 152,568 | 265,656 | 145,831 | 194,342 | 211,035 | 240,860 | 190,857 |
| #/Acre | 16.2 | 10.0 | 13.4 | 5.5 | 9.6 | 5.3 | 7.0 | 7.6 | 8.7 | 8.2 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | 37,049 | 34,411 | 40,975 | 37,891 | 32,506 | 39,692 | 37,904 | 23,935 | 20,842 | 16,716 |
| Angler Hours/Acre | 1.60 | 1.48 | 1.77 | 1.63 | 1.40 | 1.71 | 1.63 | 1.03 | 0.90 | 0.72 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0.31 | 0.32 | 0.31 | 0.35 | 0.28 | 0.18 | 0.15 | 0.36 | 0.16 | 0.15 |
| Harvest Rate (intended) | 0.26 | 0.23 | 0.23 | 0.22 | 0.24 | 0.16 | 0.14 | 0.17 | 0.14 | 0.12 |
| % Released | 15.3% | 32.4% | 27.1% | 39.0% | 15.8% | 9.4% | 8.2% | 66.0% | 9.3% | 14.4% |
| Mean Weight | 3.26 | 3.65 | 3.50 | 3.02 | 3.28 | 3.53 | 3.71 | 4.22 | 3.39 | 3.99 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Walleye | \$307,330 | \$208,930 | \$230,060 | \$187,700 | \$176,240 | \$149,390 | \$99,970 | \$82,340 | \$74,000 | \$62,050 |

White bass, Dale Hollow Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|------|------|------|------|------|---------|---------|
| Density (electrofishing) | | | | | | | | | | |
| PSD | - | - | - | - | - | - | - | - | - | 100 |
| RSD (preferred) | - | - | - | - | - | - | - | - | - | 66 |
| CPUE (total) | - | - | - | - | - | - | - | - | - | 0.62 |
| CPUE \geq Stock | - | - | - | - | - | - | - | - | - | 0.62 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | 99.6 |
| Quality | - | - | - | - | - | - | - | - | - | - |
| Preferred | - | - | - | - | - | - | - | - | - | 107.4 |
| Memorable | - | - | - | - | - | - | - | - | - | 95.2 |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | - | - | - | - | - | - | - | - | - | - |
| #/Acre | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (w hite bass) | - | - | - | - | - | - | - | - | 1,090 | 1,659 |
| Angler Hours/Acre | - | - | - | - | - | - | - | - | 0.05 | 0.07 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (w hite bass) | - | - | - | - | - | - | - | - | 0.88 | 1.09 |
| Harvest Rate (w hite bass) | - | - | - | - | - | - | - | - | 0.88 | 1.05 |
| % Released (w hite bass) | - | - | - | - | - | - | - | - | 0.0% | 12.5% |
| Mean Weight (w hite bass) | - | - | - | - | - | - | - | - | 2.08 | 2.38 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| White bass | - | - | - | - | - | - | - | - | \$1,970 | \$2,360 |

Sunfish, Dale Hollow Reservoir**Bluegill**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|-----------|----------|----------|-----------|-----------|-----------|----------|----------|----------|
| Recruitment | | | | | | | | | | |
| CPUE (mid-summer seine) | 3.20 | 3.40 | 5.00 | 5.90 | 10.80 | 8.90 | 3.10 | 2.60 | 1.60 | 4.40 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all sunfish) | 17,160 | 21,051 | 23,134 | 24,384 | 25,256 | 42,960 | 45,167 | 33,221 | 22,756 | 22,047 |
| Angler Hours/Acre | 0.74 | 0.91 | 1.00 | 1.05 | 1.09 | 1.85 | 1.95 | 1.43 | 0.98 | 0.95 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any sunfish) | 3.42 | 2.94 | 3.14 | 2.80 | 2.96 | 2.03 | 1.67 | 2.57 | 2.93 | 1.49 |
| Harvest Rate (any sunfish) | 2.35 | 1.97 | 2.26 | 1.87 | 1.80 | 1.47 | 1.08 | 1.64 | 2.03 | 0.98 |
| % Released (bluegill) | 45.8% | 40.0% | 36.8% | 43.8% | 49.1% | 32.6% | 48.4% | 55.0% | 33.7% | 37.4% |
| Mean Weight (bluegill) | 0.43 | 0.41 | 0.41 | 0.42 | 0.46 | 0.40 | 0.40 | 0.44 | 0.42 | 0.47 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Sunfish | \$114,270 | \$102,920 | \$96,120 | \$79,580 | \$112,210 | \$147,400 | \$198,260 | \$64,550 | \$64,960 | \$59,340 |

Redear

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|-----------|----------|----------|-----------|-----------|-----------|----------|----------|----------|
| Recruitment | | | | | | | | | | |
| CPUE (mid-summer seine) | 0.10 | 0.00 | 0.20 | 0.20 | 0.00 | 0.00 | 0.00 | - | - | 0.20 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all sunfish) | 17,160 | 21,051 | 23,134 | 24,384 | 25,256 | 42,960 | 45,167 | 33,221 | 22,756 | 22,047 |
| Angler Hours/Acre | 0.74 | 0.91 | 1.00 | 1.05 | 1.09 | 1.85 | 1.95 | 1.43 | 0.98 | 0.95 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any sunfish) | 3.42 | 2.94 | 3.14 | 2.80 | 2.96 | 2.03 | 1.67 | 2.57 | 2.93 | 1.49 |
| Harvest Rate (any sunfish) | 2.35 | 1.97 | 2.26 | 1.87 | 1.80 | 1.47 | 1.08 | 1.64 | 2.03 | 0.98 |
| % Released (redeer) | 19.2% | 19.5% | 14.4% | 25.3% | 26.0% | 16.6% | 23.1% | 23.5% | 22.0% | 22.9% |
| Mean Weight (redeer) | 0.50 | 0.61 | 0.63 | 0.59 | 0.57 | 0.56 | 0.48 | 0.50 | 0.51 | 0.55 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Sunfish | \$114,270 | \$102,920 | \$96,120 | \$79,580 | \$112,210 | \$147,400 | \$198,260 | \$64,550 | \$64,960 | \$59,340 |

Catfish, Dale Hollow Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all catfish) | 4,865 | 4,306 | 6,839 | 4,776 | 3,539 | 7,861 | 6,135 | 8,951 | 7,417 | 6,107 |
| Angler Hours/Acre | 0.21 | 0.19 | 0.30 | 0.21 | 0.15 | 0.34 | 0.26 | 0.39 | 0.32 | 0.26 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any catfish) | 0.51 | 0.59 | 0.35 | 0.44 | 0.28 | 0.27 | 0.32 | 0.44 | 0.44 | 0.16 |
| Harvest Rate (any catfish) | 0.51 | 0.59 | 0.33 | 0.44 | 0.28 | 0.27 | 0.32 | 0.44 | 0.44 | 0.16 |
| % Released (channel) | 2.6% | 2.6% | 11.1% | 6.3% | 2.6% | 3.3% | 0.9% | 2.1% | 1.8% | 11.1% |
| Mean Weight (channel) | 4.29 | 4.86 | 4.62 | 4.23 | 4.77 | 4.99 | 4.20 | 5.24 | 5.54 | 5.00 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Catfish | | \$22,780 | \$26,630 | \$14,470 | \$11,110 | \$14,770 | \$16,060 | \$27,040 | \$20,240 | \$13,290 |

Muskie, Dale Hollow Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|----------|---------|---------|------|---------|------|--------|------|------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | - | 887 | 399 | 360 | - | 1,255 | - | 179 | - | - |
| Angler Hours/Acre | - | 0.03 | 0.01 | 0.01 | - | 0.05 | - | 0.01 | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate | - | 0.12 | 0.00 | 0.00 | - | 0.00 | - | 0.00 | - | - |
| Harvest Rate | - | 0.08 | 0.00 | 0.00 | - | 0.00 | - | 0.00 | - | - |
| % Released | - | 56.4% | - | N/A | - | N/A | - | 100.0% | - | - |
| Mean Weight | - | 24.00 | - | N/A | - | N/A | - | - | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Muskie | - | \$12,120 | \$6,660 | \$2,810 | - | \$6,710 | - | \$420 | - | - |

Shad, Dale Hollow Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------|------|------|------|------|------|------|------|------|------|------|
| Density (electrofishing) | | | | | | | | | | |
| Alewife CPUE | - | - | - | - | - | - | - | - | - | - |
| Gizzard CPUE | 26.7 | - | - | - | - | - | - | 45.0 | - | - |
| Threadfin CPUE | 65.3 | - | - | - | - | - | - | - | - | - |

Habitat Enhancement, Dale Hollow Reservoir

| Type of Work | Details | Quantity | |
|----------------|----------------|----------|----------------|
| | | New | Renovated |
| none performed | none performed | none | none performed |
| | | | |

Water Quality Monitoring, Dale Hollow Reservoir

| Parameter | Sampling Period | Water Quality |
|------------------|-----------------|----------------|
| Temperature | none performed | none performed |
| Dissolved Oxygen | none performed | none performed |
| PH | none performed | none performed |
| Conductivity | none performed | none performed |

Angler Attitude Surveys (2016)

Fish management has been described in scientific literature as the management of three vital entities; organisms, habitat and people, all of which are inner linked. Biologists are continually evaluating this trilogy in efforts to better manage specified aquatic resources and thus offer sound management recommendations. For example, the Region 3 Reservoir crew monitors fish populations through such methods as electrofishing, netting, creel surveys, seining, etc. Additionally, we currently have a five year strategic habitat plan which addresses reservoir habitat needs and solutions achieved by various habitat projects. Creel surveys, public meetings, sport fishing comment periods, etc. all aim at obtaining input from the public, whole or in part. These data surveys and projects are vital to the overall management of the aquatic resources within the reservoirs.

Public input can be a very useful tool for biologists in the overall management of a reservoir by defining areas of concern or approval. In an effort to accomplish this, we decided to use our annual roving creel program to be the vehicle to conduct a yearlong angler attitude survey starting in the year 2013. There was no realized added expense with this survey with only an increase of interview time (2-5 minutes). Anglers were asked a series of questions in addition to routine, state-wide standardized creel questions. Typical creel data will gather such useful data as angling pressure, expenditures, harvest rates, species composition, catch rates, avg size of caught fish, socioeconomics, etc. The goal of the angler attitude survey was to achieve just what the name implies but would reflect actual anglers fishing specified reservoirs rather than general anglers with unspecified destinations or past recollections of trips gone by. Similar statewide surveys have been conducted by University of Tennessee (UT) in the past for TWRA but have been more general and broader in scope with no emphasis placed on a specific reservoir. Often times, minority user groups succeed in representing the sentiment of the angling public when actually it is not the overall view of an unbiased assessment of multiple anglers. The results of the angler attitude survey have already proven to be very informative. Future reservoir management decisions will benefit from this type of insight from anglers.

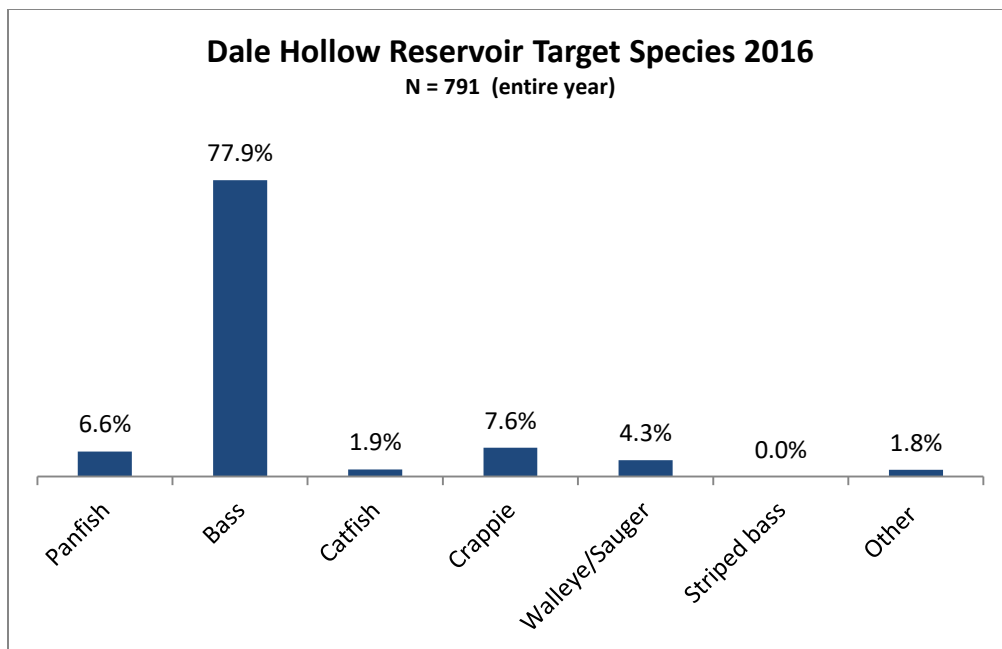
We sampled our angling public with attitude surveys again in 2016 on the four reservoirs in Region 3 that creel surveys were conducted (Center Hill, Chickamauga, Dale Hollow, and Watts Bar Reservoirs). Overall “approval” of Region 3 reservoirs by anglers who fish these reservoirs is very favorable at the current time according to these 2016 surveys. We feel confident that this summary of our “angler attitudes” will provide valuable insight to how these particular reservoirs are evaluated by our angling public. This type information coupled with our biological data should prove to be a good balance when we move forward with management decisions regarding reservoirs in Region 3 as warranted.

This project and overall fish management would not be possible without the dedication of our creel clerks (Danny Stone, Tim Poole) and the Region 3 reservoir fisheries crew.

Results from the Angler Attitude Survey conducted at Dale Hollow are as follows:

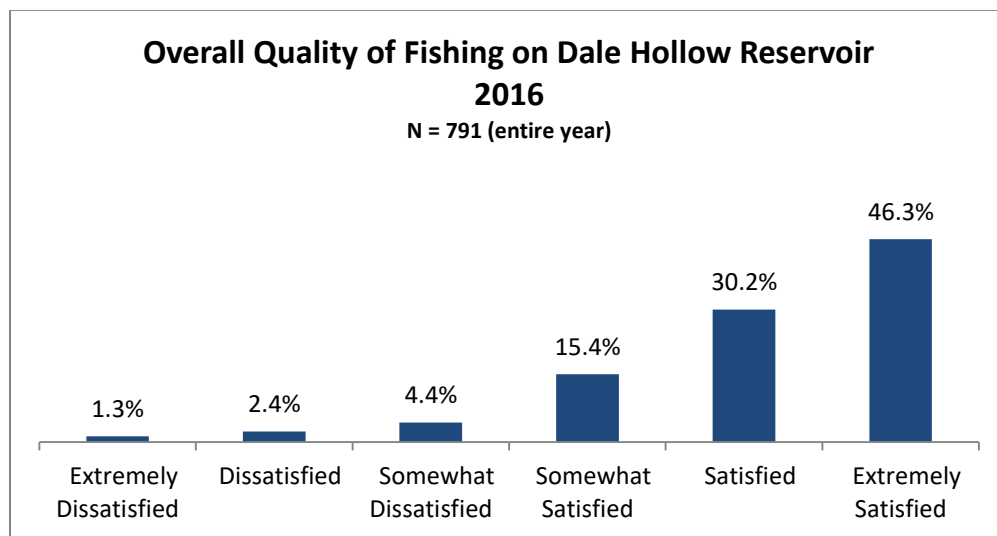
There were a total of 791 anglers fishing at Dale Hollow Reservoir, who had not been interviewed previously that year by a creel clerk, who participated in the 2016 angler attitude survey. This was a roving creel survey performed via boat and this angler attitude survey was collected in conjunction with standardized creel surveys and in accordance with statewide protocol.

The most targeted species of fish by anglers on Dale Hollow was bass (77.9%) with crappie being a distant second (7.6%), see graph below.

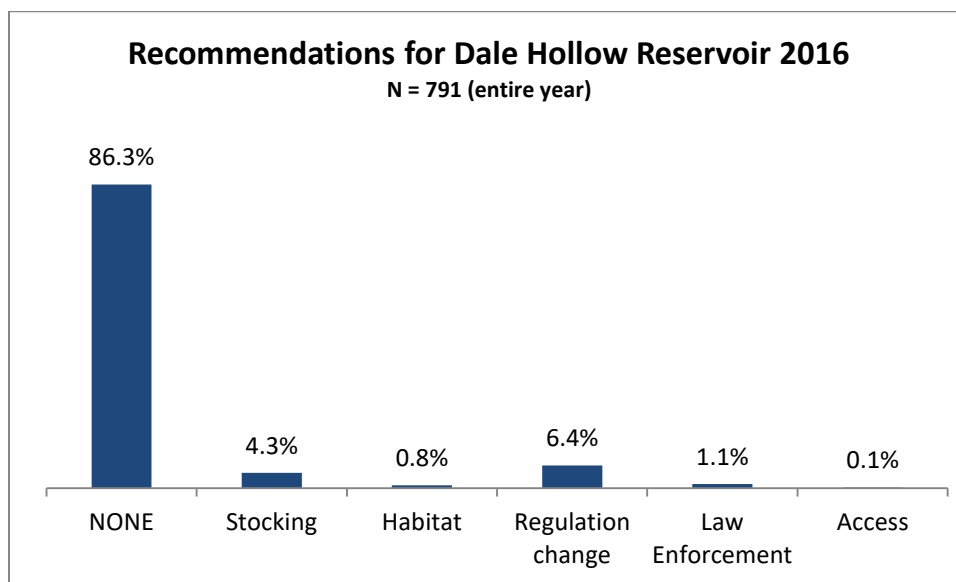


These surveys also revealed that fishermen who identified “Bass” (n=616) as their primary target species, 31.5% (194 bass anglers) of these bass anglers also fished bass tournaments. On average, these bass tournament fishermen at Dale Hollow Reservoir fished an average of 8.1 bass tournaments/year at Dale Hollow Reservoir during 2016.

As the graph below depicts anglers expressed a high satisfaction rating (91.9%) overall when asked about the “overall quality of fishing on Dale Hollow Reservoir”.



When anglers fishing Dale Hollow Reservoir were asked if they had any recommendations for the overall management of the fishery at Dale Hollow, the large majority (86.3%) had “None”. “Regulation changes” was the category with the most recommendations and they were highly variable (i.e. SMB regulation changes, limit or ban bass tournaments, restrictions for using the Alabama Rig fishing lure, etc.). Requests for stocking more walleye were also expressed. Walleye are currently stocked into Dale Hollow on an annual basis.



Overall, the angler attitudes obtained in 2016 from those fishing at Dale Hollow Reservoir are ones that exhibit a high approval for the current fish management of this reservoir by TWRA. There have been 2,211 anglers interviewed at Dale Hollow for angler satisfaction for the years 2013-2016. During these four years the “Overall satisfaction” rating has exceeded 90% of all anglers interviewed each year. This again illustrates overwhelming public support for TWRA’s management of the fisheries at Dale Hollow reservoir.

Dale Hollow Smallmouth bass regulation evaluation (2016)

In 2016, the Tennessee Fish & Wildlife Commission (TFWC) instructed TWRA's Region 3 Reservoir Fish Management to incorporate a survey question into the existing angler attitude survey to evaluate public support pertaining to the current smallmouth bass regulations at Dale Hollow Reservoir. More specifically, the goal was to evaluate the public approval of the current Protected Length Range (PLR) regulation and also offer an option for change to the existing regulation as worded by the TFWC. This survey question was presented to anglers, who identified themselves as smallmouth bass anglers, fishing at Dale Hollow between the months of January – May. This survey was conducted as part of the annual roving creel survey at Dale Hollow. The question was presented to these self-identified smallmouth bass anglers as follows:

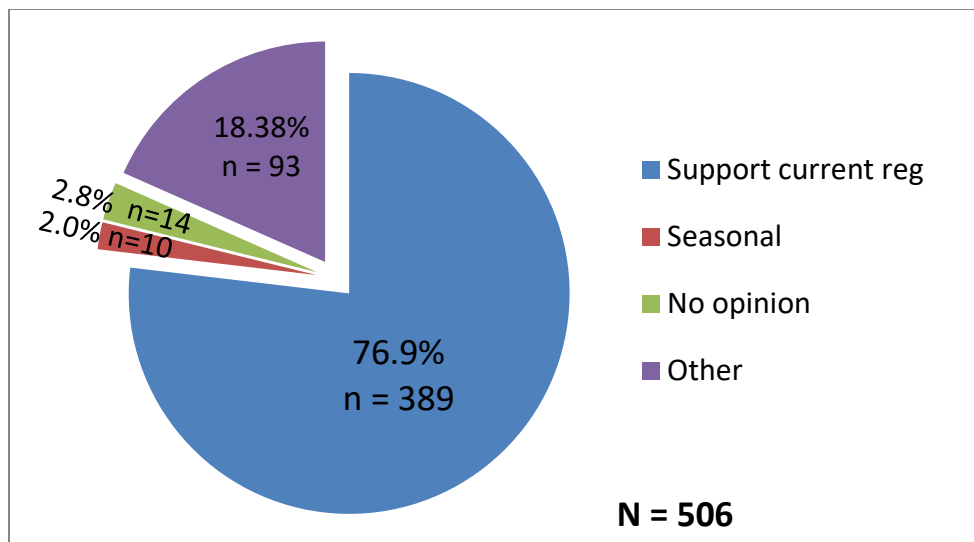
“The Tennessee Fish and Game Commission would like your opinion about the current Smallmouth Bass Regulations on Dale Hollow”. After all 4 options were read to the SMB angler, the question was asked; “Which one of the following options do you support?”

Options:

- A. Do you support keeping the current SMB regulation as it is?** (I.e. Protected Length Range - PLR, 2 fish per day, 16”-21” protected slot, 1 fish under 16”/1 fish over 21”).
- B. Do you support the proposed regulation change?** (I.e. 2 fish per day, 18” minimum length limit - MLL) between October 1 and May 15, and returning to the 16 – 21” PLR [1 fish under 16”, 1 fish over 21”] from May 16 to September 30).
- C. “No opinion”.**
- D. “Other”**

Again, it is important to note that this question was only asked to those anglers who identified themselves as those who fish for smallmouth bass at Dale Hollow Reservoir and were actually fishing at Dale Hollow during the time of the interview. Also, as the 4 options were read the order of options “A” and “B” were alternated in equitable amounts amongst the anglers so that “option A” was NOT heard first every time. This pattern was utilized to minimize any bias by one option being asked first every time. All anglers who were polled were asked if they had participated in this survey prior. If so, they were not asked the question again therefore avoiding multiple votes by one angler. Therefore each interview reflects individual anglers.

This survey question was asked starting in January (2016) and was concluded at the end of May (2016) which incorporates the time most effort is expended by anglers in pursuit of smallmouth bass due to increases in feeding and reproductive activity. Of the anglers interviewed for creel information during this time frame, there were **506 anglers** interviewed who identified themselves as smallmouth bass anglers at Dale Hollow. The results of those 506 interviews will be the focus of this survey. Region 3 Reservoir managers were very encouraged with the results of this evaluation which showed strong support for the current SMB regulations at Dale Hollow. This approval had also been confirmed with the ongoing angler attitude surveys conducted annually at Dale Hollow since 2013. Additionally, since the current SMB PLR regulation at Dale Hollow has been in place since the year 2000 this survey provided an evaluation for a long standing management implementation. The results of the described TFWC survey are as follows:



- **506 total anglers** were interviewed for the SMB regulation question in 2016 (Jan – May) at Dale Hollow. These particular anglers who were interviewed identified themselves as those who fish for SMB at Dale Hollow and were actually fishing at Dale Hollow at the time the interview was conducted.

Of the 506 SMB anglers interviewed:

- **389 anglers (76.9%) “Supported the current SMB regulations”** (Protected Length Range - PLR, 2 fish per day, 16”-21” protected slot, 1 fish under 16”/1 fish over 21”).
- **10 anglers (2.0%) “supported the proposed regulation change”** (2 fish per day, 18” minimum length limit - MLL) between October 1 and May 15, and returning to the 16 – 21” PLR [1 fish under 16”, 1 fish over 21”] from May 16 to September 30).
- **14 anglers (2.8%) had “no opinion” (Option “C”).**
- **93 anglers (18.4%) suggested “other” (Option “D”) regulation proposals which were highly variable** in ideas with several of those being more conservative and restrictive than the existing PLR (See table below with results of these “other” responses).

Table. Survey responses for “other” (Option “D”) recommendations (n=93):

| Dale Hollow SMB Survey "Other" Suggestions | | | | | | |
|--------------------------------------------|--|--|--|-------|----|---------|
| | | | | | N | % |
| Require tournament card | | | | | 5 | 5.40% |
| Increase SMB MLL Limit | | | | | 1 | 1.10% |
| 10 SMB/ No MLL | | | | | 1 | 1.10% |
| Keep 1 SMB in Slot | | | | | 2 | 2.20% |
| Catch and Release SMB Fishing Only | | | | | 3 | 3.20% |
| 12"SMB MLL/ 10 fish limit | | | | | 1 | 1.10% |
| 12"-21" Slot, Keep 1 above, and 1 below | | | | | 1 | 1.10% |
| 15" SMB MLL | | | | | 1 | 1.10% |
| 15" SMB MLL/ 5 fish limit | | | | | 1 | 1.10% |
| Keep 2 under 16", 1 over 20" | | | | | 1 | 1.10% |
| 16"-20" SMB Slot | | | | | 2 | 2.20% |
| 16"-18" SMB Slot | | | | | 1 | 1.10% |
| 16" - 23" SMB slot | | | | | 1 | 1.10% |
| 16"MLL/2 fish limit | | | | | 1 | 1.10% |
| 16" MLL | | | | | 1 | 1.10% |
| 17" - 21" Slot, keep 3 under | | | | | 1 | 1.10% |
| 18" SMB MLL | | | | | 2 | 2.20% |
| 18" SMB MLL/2 fish limit | | | | | 31 | 33.30% |
| 18" SMB MLL/5 fish limit | | | | | 28 | 30.10% |
| 18" SMB MLL/ 1 fish limit | | | | | 1 | 1.10% |
| 18"SMB MLL/ 3 fish limit | | | | | 1 | 1.10% |
| 20" SMB MLL | | | | | 1 | 1.10% |
| 21" SMB MLL | | | | | 1 | 1.10% |
| 23" SMB MLL | | | | | 4 | 4.30% |
| | | | | | | |
| | | | | Total | 93 | 100.00% |

The various “other” options (n=93) only comprised 18.4% of the opinion of the 506 anglers interviewed.

Although this survey was conducted through the roving creel program at Dale Hollow by a creel clerk, managers also gained firsthand information through the process. This was achieved by managers assisting the creel clerk or filling in for the creel clerk with a weekly presence for the months of March – May. These three months were chosen by managers because of the increase in fishing pressure associated with this time of year in regards to smallmouth bass. Managers were present with the creel clerk 37% of the time that the surveys were conducted during the months of March-May. Additionally, a review of the data showed that angler responses to the TFWC question with a manager present verses the creel clerk being alone did not show any credible differences. By being part of the survey, managers were also allowed to hear firsthand how multitudes of people had been coming to Dale Hollow annually for 20, 30 and 40 plus years to fish for SMB. Many anglers had witnessed the evolution of the smallmouth bass fishery through different regulation regimes and were very supportive of the current regulation verbally as well as the evidence of their trip expenditures

The Dale Hollow Lake Marina Operator's Association (DHLMOA) invited Region 3 Fisheries Program Manager Mark Thurman and Region 3 Reservoir Manager Mike Jolley to one of their meetings on January 12, 2016 at Celina, TN. At the meeting an overall status regarding Dale Hollow reservoir was presented by TWRA's Mark Thurman and Mike Jolley. A focus was also given regarding the SMB fishery at Dale Hollow per the interest of the DHLMOA. The DHLMOA also had questions about the TFWC survey that had been initiated regarding the evaluation of the current SMB regulation at Dale Hollow. A public video, available from the TWRA website regarding TFWC meetings, had been viewed by some of the members and/or associates of a previous TFWC meeting held at Morristown, TN in the fall of 2015. At this referenced TFWC meeting Dale Hollow SMB regs were discussed by a member of the TFWC commission and TWRA personnel. This interaction, made public via video, had initiated curiosity followed by discussion by those who had viewed or heard of the TFWC video. The DHLMOA members were very supportive of the current SMB regs during the meeting. Carrying that support forward, an unsolicited letter dated April 9, 2016, was sent to TWRA Director Ed Carter by the DHLMOA portraying their knowledge of SMB regs at Dale Hollow, their involvement with past processes, and their unified, unanimous support for the current PLR SMB regulation. This letter was sent to TWRA Director Carter before the conclusion of the TFWC survey which concluded at the end of May (See copy of referenced DHLMOA letter following this narrative).

DALE HOLLOW LAKE MARINA OPERATOR'S ASSOCIATION

Secretary Kristie Maxwell, 5274 Bradford Hicks Drive, Livingston, TN 38570

April 9, 2016

Ed Carter, Executive Director
Tennessee Wildlife Resources Agency
440 Hogan Rd.
Nashville, TN 37220



Dear Mr. Carter:

At the April, 2016 meeting of the Dale Hollow Lake Marina Operator's Association, (DHLMOA), the marina operators voted unanimously to support The Tennessee Wildlife Resource Agency's (TWRA) current "Slot-Limit" on Smallmouth Bass on Dale Hollow Lake, (DHL). Please insure that the TWRA Commissioners are informed of our strong support for this very beneficial regulation.

In 1992, an 18" size limit was established on DHL for Smallmouth Bass. This size limit seemed to help for a few years. Then Smallmouth Bass fishing got really tough for several years. A fisherman/woman was lucky to catch 5 or 6 Smallmouth per day. Then the slot limit was established in 2000. TWRA's decision to impose a slot limit on Smallmouth Bass on DHL was one of the greatest decisions ever made. It has made Smallmouth Bass fishing some of the greatest in the world. We love the reputation and take pride in being the home of the World Record Smallmouth Bass. The slot limit is responsible for bringing back Dale Hollow's original reputation as a great Smallmouth Bass Lake.

DHLMOA Members are concerned that if the slot limit were removed, the harvest of Smallmouth Bass within the slot will diminish the number and quality of the Smallmouth in lake very quickly. The slot limit has been so good for the lake that we are not willing to take a chance of going back to poor fishing. When visitors and tourists come to DHL, they want to catch a Smallmouth Bass from the lake that is still home to the largest three Smallmouth Bass in the world.

Dale Hollow reservoir continues to be a top destination for those seeking premiere and renowned SMB fishing opportunities. As the marinas located on Dale Hollow will attest, dedicated anglers from multiple states support the local businesses and marinas annually because of the famed SMB fishing. Creel surveys also show that anglers living in counties at and surrounding Dale Hollow have a high participation rate when compared in state. According to recent evaluations as outlined in this report, the current SMB regulation is highly favored among the smallmouth bass anglers who fish at Dale Hollow as well as the marina operators. Region 3 Reservoir managers have evaluated public opinion on Dale Hollow since the year 2013 and the satisfaction rate remains high for the overall quality of fishing on Dale Hollow as well as the current SMB regulation. Public comment periods offered by TWRA for sportfish recommendations annually have also very little reference to concerns of the SMB regulation at Dale Hollow. Fishing pressure at Dale Hollow for SMB is expected to remain consistent which further necessitates protection for the SMB resource through viable and favorable regulations like the current PLR is providing. Many factors influence the SMB population at Dale Hollow reservoir which can be said for any species at any location. However, fishing success for SMB at Dale Hollow has a high expectation by the angling community who ultimately have a large influence on local economies. The angler attitude surveys conducted by creel at Dale Hollow in 2016 also showed good bass tournament participation by those who identified themselves as bass fishermen. Specifically, 31.5% of bass anglers interviewed at Dale Hollow in 2016 considered themselves to be tournament fishermen who fished 8.1 bass tournaments/year at Dale Hollow (See 2016 Dale Hollow Angler Attitude summary).

In conclusion, based on the TWRA fisheries data surveys (electrofishing, seining, and creel), Dale Hollow marina operators support, and angler attitude surveys conducted via creel that all illustrate the effectiveness and support for the current SMB regulations, TWRA has no recommendations for changing the current SMB regulations at this time.

Great Falls Reservoir (2016 Annual Report)

Description

Area (acres): 2,110 **Mean Depth (feet):** **Shoreline (miles):** 120

Counties: Warren, White and Van Buren

Full Pool Elevation (feet-msl): 805 **Winter Pool Elevation (feet-msl):** 778

Dam Completion: 1916

Summary:

For the first time an annual roving creel survey was conducted on Great Falls Reservoir in 2014. This information is helpful in the overall evaluation of this reservoir (See creel data in species tables below). Although Great Falls is a small reservoir, it is a destination for many local anglers seeking black bass and crappie fishing opportunities. Because of Great Falls' narrow body and heavy influence on water levels by rain; year classes of black bass and crappie are highly susceptible to be compromised on an annual basis due to failed spawning success and at the least inconsistent. Spring electrofishing and mid-summer seining surveys help TWRA monitor gamefish populations at Great Falls.

Largemouth bass (LMB): Highly variable water level fluctuations in the spring at Great Falls will continue to be of concern and a limiting factor for favorable spawning conditions. Electrofishing survey results conducted in 2015 revealed the lowest catch rate (4.0 lmb/hour) of sub-stock LMB when compared to the past ten years. Mid-summer seining surveys conducted in 2015 also fair CPUEs which were 8.50 lmb/seine haul and close to that same rate in 2016 at 7.50 lmb/seine haul. Both of these surveys are good indicators of consecutive years of poor to fair year classes as compared to the past ten years at Great Falls in regards to LMB. Spring electrofishing surveys conducted in 2015 revealed an overall CPUE for LMB of 44.5 lmb/hour which was the highest observed in the past ten years. From this same survey the CPUE for LMB > or equal to 15 inches (the minimum length limit) was 7.3 lmb/hour, the past ten years as well. Additionally, PSD and RSD15 values have consistently remained in the desired range(s) over the past ten years confirming a LMB population that is in balance. The conditions factors (WRs) for LMB were satisfactory as well depicting an ample forage base. Good shoreline habitat (woody debris) and ample forage have helped sustain the LMB fishery at Great Falls. The recently implemented 15" minimum length limit (MLL) established in 2011 will hopefully offset perceived increases in fishing pressure at Great Falls. Thanks to the creel survey conducted in 2014, there is now baseline data established that we can compare to in the future regarding pressure and other measures. According to this 2014 creel survey, the mean weight for largemouth bass caught by anglers was 1.92 lbs with an average catch rate of 0.49 bass/hour for "any black bass". Largemouth bass fishing in Great Falls Reservoir should remain fair to good in the upcoming years. The next spring electrofishing surveys are scheduled for 2017 and are typically conducted every other year for black bass surveys.

Smallmouth bass (SMB): There are not enough smallmouth bass in Great Falls Reservoir to warrant any reporting at this time.

Spotted Bass (SPB): Fishing for spotted bass in Great Falls Reservoir is probably not an intended species for angling opportunities due to small population numbers especially when compared to largemouth bass population numbers there. The mid-summer seining surveys indicate good years of reproduction in 2008, 2009, and 2010. Unfortunately, these same mid-summer seining surveys showed

very low catch rates for young of the year spotted bass in the years 2011-2013 as well and no catches in 2014. However in 2015, SPB were collected in these seining surveys at a rate of 14.0 spb/seine haul, none were collected in these surveys in 2016. Highly variable water level fluctuations in the spring at Great Falls will continue to be of concern and a limiting factor for favorable spawning conditions. Spring electrofishing surveys performed in 2015 had a ten year low CPUE at 5 spb/hour which falls in line with the poor year classes previously observed from summer seining and spring electrofishing surveys. Data from the 2014 creel survey shows that the mean weight of harvested spotted bass from Great Falls was 0.91 lbs.

Crappie: Crappie fishing success remains stable on Great Falls Reservoir. White crappie are the dominant species of crappie in Great Falls. A targeted electrofishing survey for crappie was conducted in 2014 which showed that abundance and condition factors were favorable for crappie surveyed. The 2014 creel survey showed that on average anglers caught crappie at an average of 1.15 crappie/hour with the mean weight being 0.91 lbs. Anglers also expended \$27,610 in trip expenditures in pursuit of crappie at Great Falls in 2014 according to a roving creel survey.

Blacknose black crappie (BNC) have been stocked into Great Falls Reservoir starting in the year 2011 until 2014 and this project was evaluated in 2014 by electrofishing and roving creel surveys. The creel survey in 2014 and electrofishing surveys yielded no BNC despite those recent stockings. Therefore, hopes of establishing a BNC fishery at Great Falls via stocking and also a great potential BNC brood source have been unfounded. Due to the unrealized presence of BNC no more requests for BNC stocking allocations will be submitted for Great Falls at this time.

Bluegill: A high occurrence of young of the year bluegill was realized in the 2013, 2014, and 2015 mid-summer seining samples. However, it is not expected for Great Falls Reservoir to be a top destination for bluegill fishermen due to logistics and nearby competing larger reservoirs (i.e. Center Hill). A catch rate for “sunfish” by anglers of 1.76 sunfish/hour with an average weight of 0.34 lb. was realized in 2014 according to creel surveys.

Walleye: Walleye were stocked several years ago (2005 and previous) by TWRA into Great Falls Reservoir. Gill netting surveys geared at evaluating this project never realized any walleye. No confirmed catches of walleye by anglers have been confirmed at Great Falls reservoir either according to the 2014 creel survey conducted there.

Catfish: Angler effort and catch rates were both low in regards to catfish on Great Falls Reservoir according to the 2014 creel surveys. Both channel catfish and flathead catfish can be anticipated for the catch while pursuing catfish at Great Falls.

Lakewide Angling Summary

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|------|------|------|------|-----------|------|------|
| Angling Pressure | | | | | | | | | | |
| Angler Hours | | | | | | | | 36,448 | - | - |
| Angler Hours Per Acre | | | | | | | | 17.3 | - | - |
| Angler Trips | | | | | | | | 7,947 | - | - |
| Value of Fishery (angler expenditures creel) | | | | | | | | | | |
| All Species | | | | | | | | \$ 91,070 | - | - |

Black Bass, Great Falls Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014* | 2015 | 2016 |
|---------------------------------------------|------|------|------|------|------|------|------|----------|------|------|
| Angling Pressure | | | | | | | | | | |
| All Black Bass (hrs) | - | - | - | - | - | - | - | 13,181 | - | - |
| (hrs/acre) | - | - | - | - | - | - | - | 6.25 | - | - |
| Any Black Bass (hrs) | - | - | - | - | - | - | - | 12,768 | - | - |
| (hrs/acre) | - | - | - | - | - | - | - | 6.05 | - | - |
| Largemouth Bass (hrs) | - | - | - | - | - | - | - | 413 | - | - |
| (hrs/acre) | - | - | - | - | - | - | - | 0.20 | - | - |
| Smallmouth Bass (hrs) | - | - | - | - | - | - | - | - | - | - |
| (hrs/acre) | - | - | - | - | - | - | - | - | - | - |
| Spotted Bass (hrs) | - | - | - | - | - | - | - | - | - | - |
| (hrs/acre) | - | - | - | - | - | - | - | - | - | - |
| Tournaments (all black bass) | | | | | | | | | | |
| # Tournaments (BITE) | - | - | - | - | - | - | - | - | - | - |
| Pounds/Angler Day (BITE) | - | - | - | - | - | - | - | - | - | - |
| Bass/Angler Day (BITE) | - | - | - | - | - | - | - | - | - | - |
| Tournament Angler Hrs/Acre (creel) | - | - | - | - | - | - | - | - | - | - |
| Tournament Catch Rate (creel) | - | - | - | - | - | - | - | 0.5 | - | - |
| Non-Tournament Catch Rate (creel) | - | - | - | - | - | - | - | 0.5 | - | - |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| All Black Bass | - | - | - | - | - | - | - | \$40,210 | - | - |
| Any Black Bass | - | - | - | - | - | - | - | \$39,160 | - | - |
| Largemouth Bass | - | - | - | - | - | - | - | \$1,050 | - | - |
| Smallmouth Bass | - | - | - | - | - | - | - | - | - | - |
| Spotted Bass | - | - | - | - | - | - | - | - | - | - |

*Year-long creel begins

Largemouth Bass, Great Falls Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-------|------|-------|-------|------|------|------|-------|------|------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (spring electrofishing) | 18.50 | - | 21.20 | - | 7.25 | - | 7.00 | - | 4.00 | - |
| CPUE (mid-summer seine) | 3.50 | 0.00 | 63.00 | 27.00 | 0.50 | 0.00 | - | - | 8.50 | 7.50 |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | 45 | - | 61 | - | 54 | - | 54 | - | 64 | - |
| RSD (preferred) | 5.0 | - | 13.0 | - | 16.0 | - | 12.0 | - | 17.9 | - |
| CPUE (total) | 17.5 | - | 34.8 | - | 31.8 | - | 32.3 | - | 44.5 | - |
| CPUE \geq Stock | 14.0 | - | 13.5 | - | 24.5 | - | 25.3 | - | 40.5 | - |
| CPUE \geq MLL (15-inches) | 1.8 | - | 1.8 | - | 4.0 | - | 3.0 | - | 7.3 | - |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 86.4 | - | 94.3 | - | 94.5 | - | 93.0 | - | 86.6 | - |
| Quality | 87.2 | - | 94.5 | - | 88.5 | - | 86.1 | - | 90.6 | - |
| Preferred | 85.0 | - | 91.2 | - | 87.9 | - | 83.7 | - | 91.4 | - |
| Memorable | - | - | 110.4 | - | - | - | 89.7 | - | 90.9 | - |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate, num./hr (intended) | - | - | - | - | - | - | - | 0.29 | - | - |
| Catch Rate, num./hr (any black bass) | - | - | - | - | - | - | - | 49.0% | - | - |
| Harvest Rate, num./hr (any black bass) | - | - | - | - | - | - | - | 0.08 | - | - |
| % Released | - | - | - | - | - | - | - | \$1 | - | - |
| Mean Weight | - | - | - | - | - | - | - | 1.92 | - | - |

Spotted Bass, Great Falls Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (spring electrofishing) | 0.30 | - | 6.25 | - | 3.75 | - | 2.25 | - | 1.25 | - |
| CPUE (mid-summer seine) | 4.50 | 33.00 | 29.50 | 57.50 | 5.50 | 13.00 | 3.00 | - | 14.00 | - |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | 25 | - | 25 | - | 43 | - | 38 | - | 27 | - |
| RSD (preferred) | 0.0 | - | 0.0 | - | 13.0 | - | 6.0 | - | 0.0 | - |
| CPUE (total) | 9.8 | - | 8.3 | - | 11.3 | - | 6.3 | - | 5.0 | - |
| CPUE \geq Stock | 5.3 | - | 2.0 | - | 7.5 | - | 4.0 | - | 3.8 | - |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 95.7 | - | 86.4 | - | 95.1 | - | 102.1 | - | 90.1 | - |
| Quality | 95.7 | - | 88.4 | - | 100.3 | - | 96.2 | - | 100.8 | - |
| Preferred | 98.1 | - | - | - | 87.1 | - | 41.8 | - | - | - |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate, num./hr (intended) | - | - | - | - | - | - | - | - | - | - |
| Catch Rate, num./hr (any black b | - | - | - | - | - | - | - | 49.0% | - | - |
| Harvest Rate, num./hr (any black | - | - | - | - | - | - | - | 0.08 | - | - |
| % Released | - | - | - | - | - | - | - | \$1 | - | - |
| Mean Weight | - | - | - | - | - | - | - | 0.91 | - | - |

White Crappie, Great Falls Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014* | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|------|------|------|------|-------|------|------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | - | - | - | - | - | - | - | - | - | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | - | - | - | - | - | - | - | 100 | 100 | - |
| RSD (preferred) | - | - | - | - | - | - | - | 88 | 77.8 | - |
| CPUE (total) | - | - | - | - | - | - | 4.5 | 31.8 | 6.8 | - |
| CPUE \geq Stock | - | - | - | - | - | - | - | 31.8 | 6.8 | - |
| CPUE \geq MLL (10-inches) | - | - | - | - | - | - | - | 28.1 | 5.3 | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | 99.9 | 91.7 | - |
| Quality | - | - | - | - | - | - | - | 108.7 | 90.3 | - |
| Preferred | - | - | - | - | - | - | - | 100.5 | 90.7 | - |
| Memorable | - | - | - | - | - | - | - | 96.2 | 93.9 | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | - | - | - | - | - | - | - | - | - | - |
| #/Acre | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate, num./hr (any crappie) | - | - | - | - | - | - | - | 1.15 | - | - |
| Harvest Rate, num./hr (any crappie) | - | - | - | - | - | - | - | 69.0% | - | - |
| % Released (white crappie) | - | - | - | - | - | - | - | 0.48 | - | - |
| Mean Weight (weight crappie) | - | - | - | - | - | - | - | \$1 | - | - |
| Value of Fishery (Trip expenditures - creel) | | | | | | | | | | |
| All Crappie | - | - | - | - | - | - | - | 27610 | - | - |

*- Targeted crappie sample

Black Crappie, Great Falls Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014* | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|------|--------|--------|--------|----------|------|------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | - | - | - | - | - | - | - | - | - | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | - | - | - | - | - | - | - | - | - | - |
| RSD (preferred) | - | - | - | - | - | - | - | - | - | - |
| CPUE (total) | - | - | - | - | - | - | 1.0 | 4.1 | 2.8 | - |
| CPUE \geq Stock | - | - | - | - | - | - | - | - | - | - |
| CPUE \geq MLL (10-inches) | - | - | - | - | - | - | - | - | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | - | - | - | - | - | - | - |
| Preferred | - | - | - | - | - | - | - | - | - | - |
| Memorable | - | - | - | - | - | - | - | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | - | - | - | - | 26,880 | 22,800 | 23,328 | - | - | - |
| #/Acre | - | - | - | - | 14.7 | 12.5 | 12.7 | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate, num./hr (any crapi | - | - | - | - | - | - | - | 1.15 | - | - |
| Harvest Rate, num./hr (any cra | - | - | - | - | - | - | - | 69.0% | - | - |
| % Released (black crappie) | - | - | - | - | - | - | - | 0.38 | - | - |
| Mean Weight (black crappie) | - | - | - | - | - | - | - | \$1 | - | - |
| Value of Fishery (Trip expenditures - creel) | | | | | | | | | | |
| All Crappie | - | - | - | - | - | - | - | \$27,610 | - | - |

*-Targeted crappie sample.

Walleye, Great Falls Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------|------|------|------|------|------|------|------|------|------|------|
| Recruitment (gill netting) | | | | | | | | | | |
| Substock CPUE | - | - | - | - | - | - | - | - | - | - |
| Density (gill netting) | | | | | | | | | | |
| PSD | - | - | - | - | - | - | - | - | - | - |
| RSD (preferred) | - | - | - | - | - | - | - | - | - | - |
| CPUE (total) | - | - | - | - | - | - | - | - | - | - |
| CPUE > Stock | - | - | - | - | - | - | - | - | - | - |
| CPUE ≥ MLL (15-inches) | - | - | - | - | - | - | - | - | - | - |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (gill netting) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | - | - | - | - | - | - | - |
| Preferred | - | - | - | - | - | - | - | - | - | - |
| Memorable | - | - | - | - | - | - | - | - | - | - |
| Mortality (gill netting) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | - | - | - | - | - | - | - | - | - | - |
| #/Acre | - | - | - | - | - | - | - | - | - | - |

Catfish, Great Falls Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|------|------|------|------|---------|------|------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all catfish) | - | - | - | - | - | - | - | 1,536 | - | - |
| Angler Hours/Acre | - | - | - | - | - | - | - | 0.73 | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any catfish) | - | - | - | - | - | - | - | 0.04 | - | - |
| Harvest Rate (any catfish) | - | - | - | - | - | - | - | 0.04 | - | - |
| % Released (channel) | - | - | - | - | - | - | - | 0.0% | - | - |
| Mean Weight (channel) | - | - | - | - | - | - | - | 4.17 | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Catfish | - | - | - | - | - | - | - | \$1,690 | - | - |

Sunfish, Great Falls Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|------|------|------|------|---------|------|------|
| Recruitment | | | | | | | | | | |
| CPUE (mid-summer seine) | 9.0 | 2.5 | 3.5 | 16.5 | 5.5 | 8.0 | 32.5 | 21.0 | 18.0 | 8.0 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all sunfish) | - | - | - | - | - | - | - | 2,890 | - | - |
| Angler Hours/Acre | - | - | - | - | - | - | - | 1.40 | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any sunfish) | - | - | - | - | - | - | - | 1.76 | - | - |
| Harvest Rate (any sunfish) | - | - | - | - | - | - | - | 1.00 | - | - |
| % Released (bluegill) | - | - | - | - | - | - | - | 38.1% | - | - |
| Mean Weight (bluegill) | - | - | - | - | - | - | - | 0.34 | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Sunfish | - | - | - | - | - | - | - | \$6,160 | - | - |

Muskie, Great Falls Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------|------|------|------|------|------|------|------|------|------|------|
| Stocking | | | | | | | | | | |
| # | 500 | 45 | - | - | - | - | - | - | - | - |
| #/Acre | 0.2 | 0.0 | - | - | - | - | - | - | - | - |

*These fish were stocked per request by the Region 3 Streams Crew.

Shad, Great Falls Reservoir

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------|------|------|------|------|------|------|------|------|------|------|
| Density (electrofishing) | | | | | | | | | | |
| Alewife CPUE | - | - | - | - | - | - | - | - | - | - |
| Gizzard CPUE | 27.0 | - | 96.9 | - | - | - | - | - | - | - |
| Threadfin CPUE | 4.3 | - | 53.8 | - | - | - | - | - | - | - |

Habitat Enhancement, Great Falls Reservoir

| Type of Work | Details | Quantity | |
|----------------|---------|----------|-----------|
| | | New | Renovated |
| none performed | | | |
| | | | |

Water Quality Monitoring, Great Falls Reservoir

| Parameter | Sampling Period | Water Quality |
|------------------|-----------------|----------------|
| Temperature | none performed | none performed |
| Dissolved Oxygen | | |
| PH | | |
| Conductivity | | |

Guntersville Reservoir (2016 Annual Report)

Description

Area (acres): 67,900 (~2,500 acres in TN) **Mean Depth (feet):** 15 **Shoreline (miles):** 949

Counties: Marion County, TN, Marshall and Jackson in Alabama

Total Fishing Effort (angler hours): N/A

Total Value by Anglers: N/A

Summary:

Largemouth bass: Due to the riverine type environment present below Nickajack Dam (Guntersville headwaters, ~2,500 acres in TN) largemouth bass do not typically inhabit this for spawning purposes. This is further proven by our mid-summer seining surveys that have shown very low representation of LMB young of the year (Y-O-Y). In 2016 these mid-summer seining surveys yielded average catch rates. However, anglers fishing for LMB should experience good success due to the abundance of forage (gizzard and threadfin shad) typically present in this area. Electrofishing surveys conducted here in 2010 & 2012 showed fair catch rates for LMB. Overall CPUE (largemouth bass/hour) for the 2016 electrofishing surveys were below the past 7 year average (See LMB table below).

Smallmouth bass (SMB): This particular tailwater is not expected to be a major destination for smallmouth bass fishing as are other tailwaters upstream on the TN River (E.g. Watts Bar, Chickamauga). Smallmouth bass were represented in the 2016 mid-summer seining surveys at a rate of 1.0 smb/seine haul. Currently there is a one fish/18 inch minimum length limit on SMB in the TN section of Guntersville Reservoir. This regulation is consistent upstream along the TN River to Watts Bar dam thus incorporating Nickajack and Chickamauga Reservoirs.

Spotted bass (SPB): Based on recent surveys, fair success is expected for anglers in pursuit of spotted bass. The habitat in this section of Guntersville Reservoir should be conducive to spotted bass as are other TN River tailwater areas. Overall catch rates for SPB from electrofishing surveys in 2012 displayed an increase from like surveys conducted in 2010. The CPUE (spotted bass/hour) for the 2016 electrofishing surveys were down slightly from the 2012 figures (See SPB table below). Spotted bass populations in neighboring TN reservoirs within Region 3 have been experiencing downward trends in population abundance according to our spring electrofishing and creel surveys. This may very well hold true for this section of Guntersville as well. In 2015, SPB were represented in higher numbers (6spb/seine haul) in the mid-summer seining surveys than over the past ten years but non-existent in the 2016 surveys. There is a possibility that any "spotted bass" collected in these Guntersville headwaters could be the invasive Alabama bass that have been documented (via genetic tests) two reservoirs upstream in Chickamauga Reservoir.

Crappie: Guntersville (TN section) crappie regulations are reflective of the reservoir wide Alabama regulation of 30 fish/day at a minimum length limit (MLL) of 9 inches. In contrast, other reservoirs in Region 3 have a 10 inch MLL at 15 crappie/day creel limit. Since such a small section (~2500 acres) of Guntersville is in TN, there are no recommendations for crappie management in this section of Guntersville Reservoir.

Bluegill: As with most of the TN River, bluegill fishing remains stable and the same is expected in this section of Guntersville Reservoir. The Sequatchie River enters the TN River a short distance downstream of Nickajack Dam and presumably offers good sunfish fishing opportunities based on preferred habitat available up in the Sequatchie River which is navigable by boat. Rocky shorelines with laydowns on the main river below the dam also offer preferred habitat for a host of gamefish including bluegill.

Sauger: Variable and limited reports of sauger fishing success are heard on a yearly basis. It is assumed that a limited sauger fishery will exist in this section of Guntersville Reservoir. Currently, there are no angler surveys to evaluate fishing pressure or success here. No stocking plans for sauger or walleye exists for this Guntersville headwater area at the current time.

Catfish: Where creel surveys are conducted on tailwater areas on the TN River in Region 3 (Ft. Loudon, Watts Bar and Chickamauga), catfish populations remain consistent as does fishing success. Due to the similarities in habitat and water quality at Nickajack tailwaters (Guntersville headwaters) compared to other noted TN tailwaters, the same expectations for catfishing success should be realized.

Striped bass: Reports of successful striped bass fishing trips are not that uncommon for anglers fishing the headwaters of Guntersville. Ample forage of shad and striped bass moving in this area through dam passage will probably keep a consistent fishery present here but probably on a very limited basis since the majority of contribution of striped bass would be dependent on stocking.

Based upon the fact that only approximately 2,500 acres of the 67,900 acres that make up Guntersville Reservoir are located in Tennessee, there are no management recommendations at this time for most gamefish. However, it is recommended that data collection surveys continue to be conducted as deemed necessary to survey the fish populations. Additionally, creel info would be helpful in evaluating angling pressure, target species and fishing success, etc. in this section of Guntersville.

Largemouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|------|------|------|------|------|------|------|------|------|-------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (electrofishing) | | | | 2.00 | | 2.00 | | - | | 2.55 |
| CPUE (mid-summer seine) | 1.00 | 0.00 | 0.00 | 0.00 | 1.00 | 3.50 | 1.00 | 3.00 | 1.00 | 2.00 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | - | - | - | 87 | - | 67 | - | - | - | 56 |
| RSD (preferred) | - | - | - | 47.0 | - | 36.0 | - | - | - | 28.0 |
| CPUE (total) | - | - | - | 17.2 | - | 16.4 | - | - | - | 12.8 |
| CPUE \geq Stock | - | - | - | 15.2 | - | 14.4 | - | - | - | 3.6 |
| CPUE \geq MLL (15-inches) | - | - | - | 7.2 | - | 5.2 | - | - | - | 1.4 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | | | | - | - | - |
| Length Age-3 | | | | | | | | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | | | | 92.3 | | 96.2 | | - | - | 97.9 |
| Quality | | | | 96.5 | | 94.8 | | - | - | 94.1 |
| Preferred | | | | 96.0 | | 94.3 | | - | - | 100.7 |
| Memorable | | | | - | | 98.2 | | - | - | 99.7 |

Smallmouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (electrofishing) | | | | | | | | - | | - |
| CPUE (mid-summer seine) | 0.00 | 0.00 | 0.00 | 0.00 | 0.50 | 0.00 | 0.50 | 3.00 | 2.00 | 1.00 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | | | | | | | | - | - | - |
| RSD (preferred) | | | | | | | | - | - | - |
| CPUE (preferred) | | | | | | | | - | - | - |
| CPUE (total) | | | | 0.4 | | 2.8 | | - | - | - |
| CPUE \geq Stock | | | | | | | | - | - | - |
| CPUE \geq Preferred | | | | | | | | - | - | - |
| CPUE \geq MLL (18-inches) | | | | | | | | - | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | | | | - | - | - |
| Length Age-3 | | | | | | | | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | | | | | | | | - | - | - |
| Quality | | | | | | | | - | - | - |
| Preferred | | | | | | | | - | - | - |
| Memorable | | | | | | | | - | - | - |

Spotted Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|------|------|------|------|------|-------|------|------|------|-------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (electrofishing) | | | | | | 4.80 | | - | | 3.65 |
| CPUE (mid-summer seine) | 1.50 | 0.00 | 0.00 | 0.00 | 0.50 | 1.50 | 1.00 | 0.00 | 6.00 | 0.00 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | | | | | | 47 | | - | - | 16 |
| RSD (preferred) | | | | | | 23 | | - | - | 9 |
| CPUE (total) | | | | 6.8 | | 16.8 | | - | - | 12.7 |
| CPUE \geq Stock | | | | | | 12.0 | | - | - | 3.4 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | | | | - | - | - |
| Length Age-3 | | | | | | | | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | | | | | | 96.9 | | - | - | 93.1 |
| Quality | | | | | | 92.6 | | - | - | 103.3 |
| Preferred | | | | | | 100.1 | | - | - | 95.4 |

Sauger

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------|-------|------|------|------|------|------|------|------|------|------|
| Recruitment (gill netting) | | | | | | | | | | |
| Substock CPUE | 0.10 | | | | | | - | - | - | - |
| Density (gill netting) | | | | | | | | | | |
| PSD | 100 | | | | | | - | - | - | - |
| RSD (preferred) | 8 | | | | | | - | - | - | - |
| CPUE (total) | 2.1 | | | | | | - | - | - | - |
| CPUE \geq Stock | 2.0 | | | | | | - | - | - | - |
| CPUE \geq MLL (15-inches) | 0.2 | | | | | | - | - | - | - |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-1 | | | | | | | - | - | - | - |
| Length Age-3 | | | | | | | - | - | - | - |
| Condition (gill netting) | | | | | | | | | | |
| Stock | - | | | | | | - | - | - | - |
| Quality | 95.6 | | | | | | - | - | - | - |
| Preferred | 103.9 | | | | | | - | - | - | - |
| Memorable | - | | | | | | - | - | - | - |
| Mortality (gill netting) | | | | | | | | | | |
| Total Mortality | | | | | | | - | - | - | - |

Nickajack Reservoir (2016 Annual Report)

Description

Area (acres): 10,370 **Mean Depth (feet):** **Shoreline (miles):** 179

Counties: Hamilton and Marion

Summary:

Largemouth bass (LMB): Spring black bass electrofishing surveys were conducted at Nickajack in 2016. These are typically conducted every other year on this reservoir. Therefore the next electrofishing survey at Nickajack is scheduled for the spring of 2018.

Past spring electrofishing surveys have shown decreasing numbers of substock LMB as compared to high counts in the distant past (years 2002 and 2004). The overall CPUE (66.3 lmb/hour) for LMB realized from the 2014 spring electrofishing surveys was the lowest in the past ten plus years but rebounded in 2016 to a CPUE of 103.7 lmb/hour, about average for Nickajack. Historically, Nickajack Reservoir has been categorized by high catch rates for LMB when compared to other Tennessee Reservoirs. A variety of suitable habitat (rocky shoreline, humps, woody debris) and sustained aquatic vegetation, most notably on the lower end of the reservoir, has provided an environment favorable to LMB as well as other fish species. Although, slight concerns exist regarding perceived low recruitment, good fishing success for LMB is expected in Nickajack Reservoir at the current time. Currently there is a 15 inch minimum size limit (MLL) for LMB at Nickajack Reservoir with a daily creel limit of 5, which is also the statewide regulation for LMB.

In 2015 a Florida largemouth bass (FLMB) stocking program was launched in Nickajack Reservoir. There were three main stocking sites (Sullivan's Bend, Rankin Cove-Marion Co. Park, and Nickajack Cave embayment) selected and annual stockings will be repeated for the next several years at these locations. These sites are located in the lower end of the reservoir where water is more sluggish and aquatic vegetation presence and other favorable bass habitat is the best. Ongoing data surveys (i.e. electrofishing, genetics, and creel) will be conducted during this project to evaluate its success. There were a total of 91,052 FLMB fingerlings stocked into Nickajack in 2015 amongst the 3 sites described and 52,698 stocked in 2016 among the same locations.

Smallmouth bass (SMB): During spring black bass electrofishing surveys at Nickajack Reservoir, smallmouth bass are minimally represented if at all at the historic electrofishing sites on the lower end of Nickajack Reservoir. In contrast, near the headwaters (Chickamauga tailwaters) of Nickajack Reservoir, several smallmouth bass are caught by anglers, with some being of the trophy status, as well as observed during targeted electrofishing surveys there. This riverine environment with rocky habitat and ample amounts of forage, have proven to be conducive to a good and sustainable smallmouth bass fishery in this tailwater (Chickamauga). Excellent fishing opportunities exist in the headwaters of this reservoir basically year around, peaking in the cooler months. The Region 3 Reservoir crew specifically conducts data surveys in this tailwater area to better evaluate the smallmouth bass fishery in Nickajack as well as other species present.

Spotted bass (SPB): According to the bi-annual electrofishing surveys on Nickajack Reservoir, spotted bass numbers have declined as is evident with the past ten years of surveys, especially on the lower end of the reservoir. This is also true for other reservoirs on the TN River within Region 3. For example, overall CPUE from the electrofishing surveys have went from a high of 34 spb/hour in the year 2002 to a low representation of 4 spb/hour in 2010, 1 spb/hour in 2012 and zero in the 2014 and 2016 electrofishing efforts on Nickajack Reservoir. There are no obvious reasons for this steady decrease over the past decade. However, water flows and shifts in preferred and available habitat may have warranted some overall movements and locations of spotted bass. The delayed summer pool fill (one month later - May 15 instead of the previous April 15) of TN River reservoirs in Region 3 as part of a decision by TVA and their Reservoir Operations Study (ROS) may be a good candidate for negatively affecting spotted bass spawning success. This ROS plan was instituted in 2008. Electrofishing surveys are also conducted at the Nickajack headwaters (Chickamauga tailwaters) where a fair presence of spotted bass still exists. Anglers targeting spotted bass should concentrate in this area in the upper section of the reservoir. Currently there is a more liberal 15 spotted bass/day creel limit, no MLL in a specified area on the upper end of Nickajack Reservoir (Chickamauga Dam downstream to mouth of South Chickamauga Creek) as compared to most region and statewide regulations. This regulation was originally proposed by smallmouth bass anglers fishing this area who felt that the abundance of spotted bass were negatively affecting smallmouth bass there due to competition and the thought that spotted bass were too numerous.

Crappie: A consistent crappie population exists in Nickajack Reservoir. The best suitable habitat for crappie is found within the lower end of the reservoir where the water is more sluggish and more woody debris habitat can be found verses the more riverine characteristics of the upper end of Nickajack. Fair to good fishing for crappie is expected annually at Nickajack. For the first time, fall trapnetting surveys were conducting at Nickajack Reservoir in the fall of 2014 where both white and black crappie were represented. The substock CPUE for both were very similar with black crappie being 1.60 BC/net night and white crappie at 1.53 WC/net night. Annual trapnetting surveys for crappie at Nickajack are not warranted at this time. According to the last roving creel surveys conducted in 2012 on Nickajack, the catch rate by anglers in pursuit of crappie on Nickajack was very good at 4.21 crappie/hour. Hopefully a roving creel survey will be conducted on Nickajack in 2017.

Redear: The redear sunfish population in Nickajack continues to provide great opportunities for anglers reservoir wide. An electrofishing survey in 2010 showed a good population of redear sunfish distributed from the 4 to 10 inch range which still holds true currently. The bulk of the redear population is typically in the 7 to 9 inch length distributions. Several areas of suitable spawning habitat and desired food coexist in the reservoir yielding to successful year classes of redear sunfish. According to a roving creel survey conducted in 2011 the average catch rate for "sunfish" (redear/bluegill) was 5 fish/hour but down in 2012 to 2.18 fish/hour. Redear presence in the 2014 mid-summer seining surveys were low at 0.30 redear/seine haul, 2015 at 0.50 redear/seine haul, and back to 0.30 in 2016 surveys. However, fall trapnetting conducted in 2014 realized a catch rate of 134.5 redear/net night lending evidence of favorable redear spawning conditions. Therefore, continued excellent opportunities should exist with those anglers in pursuit of redear sunfish.

Bluegill: There is an excellent population of bluegill in Nickajack Reservoir. Mid-summer seining surveys are usually dominated by bluegill presence. The mid-summer seining samples conducted in 2014 revealed bluegill catch rates were at a decade low at 1.30 bluegill/seine haul but still higher than redear sunfish for this same survey. In 2015, bluegill bounced back in these summer seining surveys to a CPUE of 7.80 bluegill/seine haul and even more so in 2016 at a catch rate of 16.50 bluegill/seine haul. Fall trapnetting surveys conducted in 2014 targeting crappie showed a bluegill presence of 22.75 bluegill/net night which is a much lower representation than that of redear sunfish from the same collection. Angler pursuit and success for bluegill here are expected to remain consistent. Multiple areas of bluegill habitat exists throughout Nickajack Reservoir. Bluegill are highly recorded as a fish for consumption by anglers who fish Nickajack by boat or from the bank.

Sauger: Sauger are not stocked in Nickajack Reservoir at the current time nor have they been in many years. Sauger, which are native to the TN River, do exist in Nickajack. Sauger also migrate via dam passage between reservoirs that have been stocked in the past. Neighboring Chickamauga Reservoir (upstream) has received sauger stockings in the past but not currently due to a switch in stocking regimes to the sauger's cousin, walleye, in 2014. Successful propagation in the hatchery system and therefore availability is the biggest limitation for including Nickajack, as well as other viable reservoirs, with annual stockings of sauger. Without a consistent creel survey, it is impossible to determine the current angling success rate with sauger anglers. Due to the proven necessity of stocking sauger for sustaining sauger populations and the lack of currently, fishing success for sauger in Nickajack Reservoir will be limited. Reports of walleye catches are becoming more common on the upper reaches of Nickajack most likely influenced by walleye stockings in neighboring Chickamauga Reservoir upstream. Walleye stockings in Nickajack would likely be a better alternative to sauger stockings due to the success of propagation in statewide hatcheries. More validity will be given to this concept as other walleye stocking projects are evaluated in other mainstem (TN River) reservoirs in Region 3 that are currently being stocked with walleye (E.g. Watts Bar and Chickamauga).

Catfish: Although there is not much data to evaluate the catfish fishery within Nickajack Reservoir, fishing reports are consistent in reference to the success of this fishery. Several guides and anglers can be observed in pursuit of catfish on Nickajack Reservoir. Blue, channel, and flathead catfish all call Nickajack Reservoir home. As with other Tennessee Reservoirs in this region of the state, fishing success for catfish and angler pursuit is expected to remain favorable. In 2012, catfish anglers expended an estimated \$74,190 in pursuit of catfish while experiencing an average catch rate of 1.40 catfish/hour according to a roving creel survey there. The headwaters of Nickajack reservoir (Chickamauga tailwaters) are very productive in terms of catfishing success by anglers pursuing them.

Striped bass: A striped bass fishery exists in Nickajack Reservoir despite the fact that they are not stocked there. Migration of striped bass through dams from reservoirs that have striped bass stocking programs can explain this existence (i.e. Chickamauga and Watts Bar Reservoirs upstream). Also possibly a limited amount of natural reproduction may occur during years with appropriate flow within Nickajack's long riverine habitat. Ample forage bases of shad (gizzard and threadfin) and skipjack herring, especially in the headwater section preferred by striped bass, help nourish and sustain striped

bass present there. Success in regards to angling for striped bass is expected at Nickajack Reservoir but likely will not be as productive as stocked reservoirs.

Black Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|------|------|------|------|-------------|-----------|------|------|------|------|
| Angling Pressure | | | | | | | | | | |
| All Black Bass (hrs) | - | - | - | - | 119,971 | 71,948 | - | - | - | - |
| (hrs/acre) | - | - | - | - | 11.57 | 6.94 | - | - | - | - |
| Any Black Bass (hrs) | - | - | - | - | 117,844 | 71,948 | - | - | - | - |
| (hrs/acre) | - | - | - | - | 11.36 | 6.94 | - | - | - | - |
| Largemouth Bass (hrs) | - | - | - | - | 2,127 | - | - | - | - | - |
| (hrs/acre) | - | - | - | - | 0.21 | - | - | - | - | - |
| Smallmouth Bass (hrs) | - | - | - | - | - | - | - | - | - | - |
| (hrs/acre) | - | - | - | - | - | - | - | - | - | - |
| Spotted Bass (hrs) | - | - | - | - | - | - | - | - | - | - |
| (hrs/acre) | - | - | - | - | - | - | - | - | - | - |
| Tournaments (all black bass) | | | | | | | | | | |
| # Tournaments (BITE) | 1 | - | - | - | - | - | - | - | - | - |
| Pounds/Angler Day (BITE) | 4.1 | - | - | - | - | - | - | - | - | - |
| Bass/Angler Day (BITE) | 2.6 | - | - | - | - | - | - | - | - | - |
| Tournament Angler Hrs/Acre (creel) | - | - | - | - | - | - | - | - | - | - |
| Tournament Catch Rate (creel) | - | - | - | - | 0.86 | 0.60 | - | - | - | - |
| Non-Tournament Catch Rate (creel) | - | - | - | - | 0.79 | 0.92 | - | - | - | - |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| All Black Bass | - | - | - | - | \$1,146,810 | \$208,660 | - | - | - | - |
| Any Black Bass | - | - | - | - | \$1,143,160 | \$208,660 | - | - | - | - |
| Largemouth Bass | - | - | - | - | \$3,650 | - | - | - | - | - |
| Smallmouth Bass | - | - | - | - | - | - | - | - | - | - |
| Spotted Bass | - | - | - | - | - | - | - | - | - | - |

Largemouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|------|-------|------|-------|-------|-------|------|-------|------|---------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (spring electrofishing) | - | 9.30 | - | - | - | 8.50 | - | 0.67 | - | - |
| CPUE (mid-summer seine) | 3.00 | 2.80 | 1.30 | 2.30 | 1.50 | 0.80 | 3.30 | 2.80 | 2.80 | 2.50 |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD (quality) | - | 82.0 | - | 93.0 | - | 81.0 | - | 75.0 | - | 76.2 |
| RSD (preferred) | - | 36.0 | - | 30.0 | - | 50.0 | - | 39.0 | - | 34.0 |
| CPUE (total) | - | 106.3 | - | 119.0 | - | 78.8 | - | 66.3 | - | 103.7 |
| CPUE \geq Stock | - | 97.0 | - | 108.0 | - | 70.3 | - | 48.7 | - | 45.9 |
| CPUE \geq MLL (15-inches) | - | - | - | 32.3 | - | 35.3 | - | 15.4 | - | 15.4 |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | - | 98.5 | - | 91.2 | - | 94.6 | - | 91.7 | - | 88.6 |
| Quality | - | 95.0 | - | 89.6 | - | 94.9 | - | 85.4 | - | 91.8 |
| Preferred | - | 93.1 | - | 85.9 | - | 93.9 | - | 88.3 | - | 90.7 |
| Memorable | - | 93.5 | - | - | - | 94.0 | - | 112.7 | - | 91.9 |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | - | - | - | - | - | - | - | - | - | 52,698* |
| #/Acre | - | - | - | - | - | - | - | - | - | 5.1 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate, num./hr (intended) | - | - | - | - | 0.81 | - | - | - | - | - |
| Catch Rate, num./hr (any black bass) | - | - | - | - | 0.89 | 0.94 | - | - | - | - |
| Harvest Rate, num./hr (any black bass) | - | - | - | - | 0.07 | 0.02 | - | - | - | - |
| % Released | - | - | - | - | 90.4% | 97.1% | - | - | - | - |
| Mean Weight | - | - | - | - | 2.63 | 2.95 | - | - | - | - |

Note: * represents stocked FLMB

Smallmouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|------|------|------|------|-------|-------|------|------|------|------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (spring electrofishing) | - | - | - | - | - | - | - | - | - | - |
| CPUE (mid-summer seine) | 0.00 | 0.30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.30 | - | 0.80 | 0.50 |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | - | - | - | - | - | - | - | - | - | - |
| RSD (preferred) | - | - | - | - | - | - | - | - | - | - |
| CPUE (preferred) | - | - | - | - | - | - | - | - | - | - |
| CPUE (total) | - | - | - | - | - | 0.3 | - | - | - | - |
| CPUE \geq Stock | - | - | - | - | - | - | - | - | - | - |
| CPUE \geq Preferred | - | - | - | - | - | - | - | - | - | - |
| CPUE \geq MLL (18-inches) | - | - | - | - | - | - | - | - | - | - |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | - | - | - | - | - | - | - |
| Preferred | - | - | - | - | - | - | - | - | - | - |
| Memorable | - | - | - | - | - | - | - | - | - | - |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate, num./hr (intended) | - | - | - | - | 0.13 | - | - | - | - | - |
| Catch Rate, num./hr (any black ba | - | - | - | - | 0.89 | 0.94 | - | - | - | - |
| Harvest Rate, num./hr (any black l | - | - | - | - | 0.07 | 0.02 | - | - | - | - |
| % Released | - | - | - | - | 98.0% | 96.0% | - | - | - | - |
| Mean Weight | - | - | - | - | 4.68 | 3.94 | - | - | - | - |

Spotted Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|------|------|------|------|-------|-------|------|------|------|------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (spring electrofishing) | - | 0.30 | - | - | - | - | - | - | - | - |
| CPUE (mid-summer seine) | 3.80 | 1.50 | 0.00 | 3.30 | 2.30 | 2.50 | 6.50 | - | 3.80 | 5.00 |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | - | 50 | - | - | - | - | - | - | - | - |
| RSD (preferred) | - | 9 | - | - | - | - | - | - | - | - |
| CPUE (total) | - | 7.7 | - | 4.0 | - | 1.0 | - | - | - | - |
| CPUE \geq Stock | - | 7.4 | - | - | - | - | - | - | - | - |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | - | 94.1 | - | - | - | - | - | - | - | - |
| Quality | - | 89.1 | - | - | - | - | - | - | - | - |
| Preferred | - | 76.7 | - | - | - | - | - | - | - | - |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate, num./hr (intended) | - | - | - | - | 0.21 | - | - | - | - | - |
| Catch Rate, num./hr (any black bass) | - | - | - | - | 0.89 | 0.94 | - | - | - | - |
| Harvest Rate, num./hr (any black bass) | - | - | - | - | 0.07 | 0.02 | - | - | - | - |
| % Released | - | - | - | - | 96.9% | 99.2% | - | - | - | - |
| Mean Weight | - | - | - | - | 2.05 | 1.57 | - | - | - | - |

Black Crappie

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|------|-----------|----------|------|------|------|------|
| Recruitment (fall trapnetting) | | | | | | | | | | |
| Substock CPUE | - | - | - | - | - | - | - | 1.60 | - | - |
| Substock CPUE (summer seining) | | | | | | | | | | 1 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | - | - | - | - | - | - | - | - | - | 100 |
| RSD (preferred) | - | - | - | - | - | - | - | - | - | 79 |
| CPUE (total) | - | - | - | - | - | 0.5 | - | - | - | 26.9 |
| CPUE > Stock | - | - | - | - | - | - | - | - | - | 20.2 |
| CPUE ≥ MLL (10-inches) | - | - | - | - | - | - | - | - | - | 16.8 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | - | - | - | - | - | - | 93.7 |
| Preferred | - | - | - | - | - | - | - | - | - | 94.6 |
| Memorable | - | - | - | - | - | - | - | - | - | 89.1 |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | - | - | - | - | 11,300 | 4,054 | - | - | - | - |
| Angler Hours/Acre | - | - | - | - | 1.09 | 0.39 | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | - | - | - | - | 2.08 | 4.21 | - | - | - | - |
| Harvest Rate (any crappie) | - | - | - | - | 0.73 | 1.12 | - | - | - | - |
| % Released (black crappie) | - | - | - | - | 63.0% | 71.4% | - | - | - | - |
| Mean Weight (black crappie) | - | - | - | - | 0.83 | 0.80 | - | - | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | - | - | - | - | \$106,910 | \$12,740 | - | - | - | - |

White Crappie

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|------|-----------|----------|------|------|------|------|
| Recruitment (fall trapnetting) | | | | | | | | | | |
| Substock CPUE | - | - | - | - | - | - | - | 1.53 | - | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | - | - | - | - | - | - | - | - | - | - |
| RSD (preferred) | - | - | - | - | - | - | - | - | - | - |
| CPUE (total) | - | - | - | - | - | 0.5 | - | - | - | - |
| CPUE \geq Stock | - | - | - | - | - | - | - | - | - | - |
| CPUE \geq MLL (10-inches) | - | - | - | - | - | - | - | - | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | - | - | - | - | - | - | - |
| Preferred | - | - | - | - | - | - | - | - | - | - |
| Memorable | - | - | - | - | - | - | - | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | - | - | - | - | 11,300 | 4,054 | - | - | - | - |
| Angler Hours/Acre | - | - | - | - | 1.09 | 0.39 | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | - | - | - | - | 2.08 | 4.21 | - | - | - | - |
| Harvest Rate (any crappie) | - | - | - | - | 0.73 | 1.12 | - | - | - | - |
| % Released (black crappie) | - | - | - | - | 89.9% | 78.6% | - | - | - | - |
| Mean Weight (black crappie) | - | - | - | - | 0.92 | 0.79 | - | - | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | - | - | - | - | \$106,910 | \$12,740 | - | - | - | - |

Striped Bass*

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|------|------|-------|------|------|------|------|
| Recruitment (gill netting) | | | | | | | | | | |
| Substock CPUE | - | - | - | - | - | - | - | - | - | - |
| Density (gill netting) | | | | | | | | | | |
| PSD | - | - | - | - | - | - | - | - | - | - |
| RSD (preferred) | - | - | - | - | - | - | - | - | - | - |
| CPUE (total) | - | - | - | - | - | - | - | - | - | - |
| CPUE > Stock | - | - | - | - | - | - | - | - | - | - |
| CPUE ≥ 15-inches | - | - | - | - | - | - | - | - | - | - |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-2 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (gill netting) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | - | - | - | - | - | - | - |
| Preferred | - | - | - | - | - | - | - | - | - | - |
| Memorable | - | - | - | - | - | - | - | - | - | - |
| Mortality (gill netting) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | - | - | - | - | - | - | - | - | - | - |
| #/Acre | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | - | - | - | - | - | 75 | - | - | - | - |
| Angler Hours/Acre | - | - | - | - | - | 0.01 | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | - | - | - | - | 0.00 | - | - | - | - |
| Harvest Rate (intended) | - | - | - | - | - | 0.00 | - | - | - | - |
| % Released | - | - | - | - | - | 98.3% | - | - | - | - |
| Mean Weight | - | - | - | - | - | 16.70 | - | - | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Striped Bass | - | - | - | - | - | - | - | - | - | - |

Bluegill

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|-------|-------|-------|----------|-------|-------|-------|------|-------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (electrofishing) | - | - | - | - | - | - | - | - | - | - |
| CPUE (mid-summer seine) | 2.50 | 28.00 | 25.30 | 12.80 | 12.00 | 7.50 | 10.80 | 1.30 | 7.80 | 16.50 |
| Substock CPUE (fall trapnetting) | | | | | | | | 22.75 | | |
| Density (electrofishing) | | | | | | | | | | |
| PSD | - | - | - | - | - | - | - | - | - | - |
| RSD (preferred) | - | - | - | - | - | - | - | - | - | - |
| CPUE (total) | - | - | - | - | - | - | - | - | - | - |
| CPUE ≥ Stock | - | - | - | - | - | - | - | - | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | - | - | - | - | - | - | - |
| Preferred | - | - | - | - | - | - | - | - | - | - |
| Memorable | - | - | - | - | - | - | - | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all sunfish) | - | - | - | - | 1,141 | 827 | - | - | - | - |
| Angler Hours/Acre | - | - | - | - | 0.11 | 0.08 | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any sunfish) | - | - | - | - | 5.00 | 2.18 | - | - | - | - |
| Harvest Rate (any sunfish) | - | - | - | - | 0.00 | 1.54 | - | - | - | - |
| % Released (bluegill) | - | - | - | - | 71.1% | 53.6% | - | - | - | - |
| Mean Weight (bluegill) | - | - | - | - | 0.28 | 0.34 | - | - | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Sunfish | - | - | - | - | \$13,290 | \$820 | - | - | - | - |

Redear

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|------|----------|-------|------|-------|------|------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (electrofishing) | - | - | - | 0.00 | - | 1.00 | - | - | - | - |
| CPUE (mid-summer seine) | 0.00 | 6.30 | 2.30 | 0.30 | 0.00 | 0.00 | 4.00 | 0.30 | 0.50 | 0.30 |
| Substock CPUE (fall trapnetting) | | | | | | | | 134.5 | | |
| Density (electrofishing) | | | | | | | | | | |
| PSD | - | - | - | 72 | - | 29.0 | - | 87.0 | - | - |
| RSD (preferred) | - | - | - | 24.0 | - | 1.0 | - | 21.0 | - | - |
| CPUE (total) | - | - | - | 70.7 | - | 22.0 | - | 42.7 | - | - |
| CPUE > Stock | - | - | - | 70.7 | - | 21.0 | - | 17.8 | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | - | - | - | 91.8 | - | - | - | 103.0 | - | - |
| Quality | - | - | - | 94.4 | - | - | - | 105.7 | - | - |
| Preferred | - | - | - | 99.6 | - | - | - | 101.8 | - | - |
| Memorable | - | - | - | - | - | - | - | 104.8 | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all sunfish) | - | - | - | - | 1,141 | 827 | - | - | - | - |
| Angler Hours/Acre | - | - | - | - | 0.11 | 0.08 | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any sunfish) | - | - | - | - | 5.00 | 2.18 | - | - | - | - |
| Harvest Rate (any sunfish) | - | - | - | - | 0.00 | 1.54 | - | - | - | - |
| % Released (redeer) | - | - | - | - | 46.3% | 45.4% | - | - | - | - |
| Mean Weight (redeer) | - | - | - | - | 0.47 | 0.39 | - | - | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Sunfish | - | - | - | - | \$13,290 | \$820 | - | - | - | - |

Catfish

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|------|-----------|----------|------|------|------|------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all catfish) | - | - | - | - | 26,946 | 28,096 | - | - | - | - |
| Angler Hours/Acre | - | - | - | - | 2.60 | 2.71 | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any catfish) | - | - | - | - | 1.09 | 1.40 | - | - | - | - |
| Harvest Rate (any catfish) | - | - | - | - | 0.59 | 0.65 | - | - | - | - |
| % Released (channel) | - | - | - | - | 61.5% | 61.6% | - | - | - | - |
| Mean Weight (channel) | - | - | - | - | 2.43 | 2.93 | - | - | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Catfish | - | - | - | - | \$248,560 | \$74,190 | - | - | - | - |

Shad

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------------------------|------|------|------|------|------|------|------|-------|------|------|
| Density (Spring Electrofishing) | | | | | | | | | | |
| Alewife CPUE | - | - | - | - | - | - | - | - | - | - |
| Gizzard CPUE | - | 8.3 | - | - | - | - | - | - | - | 18.6 |
| Threadfin CPUE | - | - | - | - | - | - | - | - | - | - |
| Threadfin CPUE (fall trapnetting) | | | | | | | | 23.90 | | - |

Habitat Enhancement - 2016

| Type of Work | Details | Quantity | |
|----------------|---------|----------|-----------|
| | | New | Renovated |
| None performed | | | |

Water Quality Monitoring - 2016

| Parameter | Sampling Period | Water Quality |
|------------------|-----------------|---------------|
| Temperature | | |
| Dissolved Oxygen | | |
| PH | | |
| Conductivity | | |

Nickajack Headwater Reservoir (2016 Annual Report)

Description

Area: Due to the uniqueness displayed in “tailwater areas”, a more in-depth survey was determined to be a good management tool into the overall evaluation of the reservoir. However, due to drastic differences in flows, habitat, temperature, clarity, etc. these sampling efforts are reported specifically in relation to this “tailwater area” and not the reservoir as a whole. Due to the fact that conditions in this area can fluctuate drastically from day to day as well as hour to hour, thus possibly effecting survey outcomes, it is advised that established long time trends be utilized and considered before making any management observations or recommendations.

This particular study area typically exists between Chickamauga Dam down to the area of South Chickamauga Creek. The majority of the data collections are aimed at black bass and to a lesser extent striped bass at the current time within this location.

Counties: Hamilton

Summary:

Largemouth Bass

| | 2007(Day) | 2007(Night) | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-----------|-------------|------|-------|------|------|------|------|------|------|------|
| Recruitment (electrofishing) | | | | | | | | | | | |
| Substock CPUE | 16.00 | 23.20 | | 2.90 | | | | 0.00 | - | - | - |
| Density (electrofishing) | | | | | | | | | | | |
| PSD | 43 | 21 | | 82 | | | | | - | - | - |
| RSD (preferred) | 26.0 | 3.0 | | 45.0 | | | | | - | - | - |
| CPUE (total) | 28.6 | 36.4 | | 38.0 | | 10.8 | | | - | - | - |
| CPUE ≥ Stock | 12.6 | 13.2 | | 35.1 | | | | | - | - | - |
| CPUE ≥ MLL (15-inches) | 2.9 | 0.5 | | 15.9 | | | | | - | - | - |
| Growth (electrofishing) | | | | | | | | | | | |
| Length Age-1 | | | | | | | | | - | - | - |
| Length Age-3 | | | | | | | | | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | | |
| Stock | 91.3 | 92.3 | | 94.6 | | | | | - | - | - |
| Quality | 94.1 | 102.5 | | 99.6 | | | | | - | - | - |
| Preferred | 104.3 | - | | 102.7 | | | | | - | - | - |
| Memorable | 104.3 | - | | 119.2 | | | | | - | - | - |

Samples taken during day unless otherwise noted.

Smallmouth Bass

| | 2007(Day) | 2007(Night) | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-----------|-------------|------|------|------|------|------|------|------|------|------|
| Recruitment (electrofishing) | | | | | | | | | | | |
| Substock CPUE | 4.90 | 5.80 | | | | | | 0.00 | - | - | - |
| Density (electrofishing) | | | | | | | | | | | |
| PSD | 100 | 38 | | | | | | | - | - | - |
| RSD (preferred) | - | 13 | | | | | | | - | - | - |
| CPUE (preferred) | - | - | | | | | | | - | - | - |
| CPUE (total) | 5.2 | 14.2 | | 2.5 | | 1.7 | | | - | - | - |
| CPUE ≥ Stock | 0.3 | 8.4 | | | | | | | - | - | - |
| CPUE ≥ Preferred | - | - | | | | | | | - | - | - |
| CPUE ≥ MLL (18-inches) | - | 0.5 | | | | | | | - | - | - |
| Growth (electrofishing) | | | | | | | | | | | |
| Length Age-1 | | | | | | | | | - | - | - |
| Length Age-3 | | | | | | | | | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | | |
| Stock | 113.3 | 100.5 | | | | | | | - | - | - |
| Quality | - | 84.8 | | | | | | | - | - | - |
| Preferred | - | 120.2 | | | | | | | - | - | - |
| Memorable | - | 102.0 | | | | | | | - | - | - |

Spotted Bass

| | 2007(Day) | 2007(Night) | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-----------|-------------|------|------|------|------|------|------|------|------|------|
| Recruitment (electrofishing) | | | | | | | | | | | |
| Substock CPUE | 28.00 | 53.20 | | | | | | 0.00 | - | - | - |
| Density (electrofishing) | | | | | | | | | | | |
| PSD | 37 | 33 | | | | | | | - | - | - |
| RSD (preferred) | 7 | 6 | | | | | | | - | - | - |
| CPUE (total) | 35.7 | 117.4 | | 12.6 | | 6.3 | | | - | - | - |
| CPUE ≥ Stock | 7.7 | 64.2 | | | | | | | - | - | - |
| Growth (electrofishing) | | | | | | | | | | | |
| Length Age-1 | | | | | | | | | - | - | - |
| Length Age-3 | | | | | | | | | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | | |
| Stock | 95.1 | 104.7 | | | | | | | - | - | - |
| Quality | 94.8 | 109.4 | | | | | | | - | - | - |
| Preferred | 91.2 | 105.7 | | | | | | | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | | |
| Total Mortality | | | | | | | | | - | - | - |

Samples taken during day unless otherwise noted.

Parksville Reservoir (2016 Annual Report)

Description

Area (acres): 1,930

Mean Depth (feet):

Shoreline (miles): 47

Counties: Polk

Summary:

Largemouth bass (LMB): Spring electrofishing surveys were conducted on Parksville Reservoir in 2015 to evaluate black bass. These surveys are typically conducted every other year therefore the next electrofishing survey is scheduled for 2017.

Since the realization of Alabama bass in Parksville and the advancement of this species, the LMB population has decreased according to spring electrofishing surveys. CPUE for substock LMB is currently low which is also consistent with the evaluation over the past years of blackbass electrofishing surveys; 3.0 lmb/hour in the 2011 spring electrofishing surveys, 3.33 lmb/hour in the 2013 surveys and 0.33 lmb/hour for 2015. Recent electrofishing surveys have shown that species composition in reference to black bass is heavily skewed towards Alabama bass with this species most recently representing over 60% of the black bass composition at Parksville Reservoir. Before Alabama bass were realized, largemouth bass comprised 100% of the black bass presence at Parksville according to spring electrofishing surveys. Mid-summer seining surveys have not had a good representation of LMB contrary to the high numbers of Alabama bass found in the same surveys. Overall CPUE of 33 lmb/hour in the 2013 electrofishing surveys did show a rebound from low numbers captured within the previous two surveys but the 2015 results were at an overall low at 11.7 lmb/hour. The CPUE for LMB ≥ 15 " was also at a record low at 1.7 lmb/hour. These CPUEs per spring electrofishing surveys do not reflect well currently for the LMB population that is no doubt being negatively impacted by the dominant presence of Alabama bass. The condition (Wr's) of LMB collected was consistent with past years indicating stable forage bases for now. Historically, Parksville has been characterized by being very nutrient poor, high contaminant levels (mainly copper) and hosting a very limited forage base.

Smallmouth bass (SMB): No representative samples of smallmouth bass have been collected in our data surveys on Parksville Reservoir. Limited reports from a few fishermen say they catch smallmouth bass on a rare occasion. There are very low if any expectations for catches of smallmouth bass in Parksville Reservoir.

Alabama Bass: In 2001, a small representation of "spotted bass" (2 fish) were observed during the bi-annual spring electrofishing surveys on Parksville Reservoir by TWRA's Region 3 Reservoir Management crew. Since 2001, it has been proven that these are Alabama bass according to genetic tests rather than the native northern strain "Kentucky" spotted bass historically found in TN reservoirs. Other genetic tests performed on "spotted bass" from Parksville confirm that they are all 100% Alabama bass. To date, these Alabama bass have been very prolific within the waters of Parksville. For example, overall CPUE from our electrofishing surveys have increased from a rate of 4.0 Alabama bass/hr in 2003 to a rate of 48.7 Alabama bass/hr in 2013 and 35.3 Alabama bass/hr in 2015. According to the mid-summer seining surveys conducted in 2011, the catch rates were at 11 Alabama bass/seine haul and in 2014 this same survey yielded 10 Alabama bass/seine haul, much higher than the numbers for LMB from these same surveys. The seining survey realized a catch rate of 1.0 Alabama bass/seine haul in 2016. Overall, these seining sample numbers are very reflective of positive spawning results for Alabama bass in Parksville. The temporary "spotted bass" state record for TN weighing 5 lb. 14 Oz in 2008 was caught in Parksville

Reservoir. Eventually, this record fish was confirmed by genetic tests to be an Alabama bass. Since this record two new record Alabama bass have been caught in TN waters in or adjoining Parksville Reservoir. The first record was caught a short distance below Parksville Dam (Ocoee River, tributary to Chickamauga Reservoir) in 2010 weighing 6 lbs. 07 oz. Currently the Alabama bass record for TN is once again from within Parksville Reservoir weighing 7 pounds even caught on March 10, 2014. The identity of this record fish was confirmed to be that of an Alabama bass by genetic tests. Alabama bass continue to expand within this reservoir and beyond (E.g. Chickamauga and Watts Bar reservoirs). Historically, Parksville's limiting factors for largemouth bass were low forage bases, poor water quality and low presence of preferred bass habitat. Currently, aquatic vegetation is present on the upper and lower ends of the reservoir. Additionally, blue back herring have been documented in the reservoir by the U.S. Forest Service and also by shad netting efforts conducted by the TWRA Region 3 Reservoir Crew in 2014. So not only are Alabama bass expanding but apparently so are other contributing factors to propel this population of non-native fish to expand and dominate with the small area of Parksville Reservoir (~1,900 surface acres). Condition factors (Wrs) for Alabama bass collected during the spring electrofishing surveys were comparable to that of the LMB from the same survey. The population of Alabama bass in Parksville is expected to unfortunately remain stable if not continuing to increase. It is perceived that Alabama bass will continue to negatively impact the native LMB population at Parksville Reservoir.

Crappie: Parksville Reservoir does not rival other reservoirs in close proximity geographically with regards to crappie fishing success. Because of the notable clarity in this reservoir, it is better suited for black crappie rather than white crappie. Fishing for crappie on Parksville Reservoir will provide mixed success according to electrofishing surveys and recent creel surveys. No consistency with realized high catch rates is expected. In hopes of increasing the crappie population at Parksville black and blacknose crappie have been stocked in Parksville annually since 2013 by TWRA. An additionally objective was to hopefully create a hatchery brood source for blacknose crappie at Parksville as well to facilitate crappie production at close by Sugar Creek and Hiwassee fish hatcheries, which are managed by the TWRA Region 3 Reservoir Fish Management crew. Future evaluations will reveal the success of this project or the lack of. According to the roving creel survey in 2013 anglers caught crappie at a rate of 1.30 crappie/hour. There were 43,151 blacknose crappie stocked into Parksville in the fall of 2016 by TWRA.

Redear: Redear sunfish have been stocked collectively with bluegill in Parksville Reservoir on different occasions. Redear sunfish were first stocked into Parksville in the year 2007 in hopes of supplying a forage base while also offering increased angling opportunities. Most recently 56,000 redear fingerlings were stocked into Parksville Reservoir in 2015 and 92,120 in 2016. Time will tell how prolific they are in this reservoir. Limited fishing success is expected at the current time although some reports of nice sized redear caught by panfish anglers have been received. The 2013 creel report showed little effort and success in regards to overall panfishing in Parksville.

Bluegill: Bluegill have a good presence in Parksville Reservoir. Additionally, they were stocked in 2007 in conjunction with redear sunfish to help promote and sustain a forage base for gamefish there. Bluegill were also stocked in 2008, 2011 and a small bluegill/redear mix in 2016 (4,338 fingerlings). According to limited fishing reports, anglers enjoy good success of bluegill angling there during peak opportunistic times. Fair success should be expected at the current time. Sunfish (bluegill, redear) were caught at a rate of 2 fish/hour according to creel surveys which were conducted at Parksville in 2013. Bluegill abundance remains consistent in the mid-summer seining surveys (CPUE = 12.00 bluegill/seine haul) which should be a reflection of positive annual spawning success.

Yellow Perch: During the 2016 spring blackbass electrofishing surveys, yellow perch were observed and collected for data analysis. The overall CPUE realized was 144.9 yellow perch/hour. This showed a good abundance of yellow perch with great possibilities for angling. Condition factors (Wr's) were down from

optimal levels signaling a limited forage base for optimum conditions at that time. Future electrofishing surveys should provide valuable information for the ongoing evaluation of this yellow perch fishery.

Shad: Shad populations in Parksville Reservoir are limited at best. During the bi-annual spring electrofishing surveys, some large adult gizzard shad are observed. However, rarely if ever are schools of young shad observed that would offer promise of a sustainable forage base. A large die-off of blueback herring during the winter was observed by the public and the U.S. Forest Service a few years ago. It is thought that these blue back have been illegally introduced as bait or intentions of providing forage for the illegally introduced Alabama bass. In April of 2014, a total of 5 gill nets were set by TWRA in Parksville in search of blueback herring. Five blueback herring were caught in these surveys, confirming from earlier reports their presence in Parksville Reservoir.

Lakewide Creel Results

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|------|------|------|----------|------|------|------|
| Angling Pressure | | | | | | | | | | |
| Angler Hours | - | - | - | - | - | - | 44,156 | - | - | - |
| Angler Hours Per Acre | - | - | - | - | - | - | 23.36 | - | - | - |
| Angler Trips | - | - | - | - | - | - | 7,029 | - | - | - |
| Value of Fishery (angler expenditures creel) | | | | | | | | | | |
| All Species | - | - | - | - | - | - | \$99,940 | - | - | - |

Black Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|------|------|------|------|------|------|----------|------|------|------|
| Angling Pressure | | | | | | | | | | |
| All Black Bass (hrs) | - | - | - | - | - | - | - | - | - | - |
| (hrs/acre) | - | - | - | - | - | - | - | - | - | - |
| Any Black Bass (hrs) | - | - | - | - | - | - | 36,771 | - | - | - |
| (hrs/acre) | - | - | - | - | - | - | 19.45 | - | - | - |
| Largemouth Bass (hrs) | - | - | - | - | - | - | - | - | - | - |
| (hrs/acre) | - | - | - | - | - | - | - | - | - | - |
| Smallmouth Bass (hrs) | - | - | - | - | - | - | - | - | - | - |
| (hrs/acre) | - | - | - | - | - | - | - | - | - | - |
| Alabama Bass (hrs) | - | - | - | - | - | - | - | - | - | - |
| (hrs/acre) | - | - | - | - | - | - | - | - | - | - |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| All Black Bass | - | - | - | - | - | - | - | - | - | - |
| Any Black Bass | - | - | - | - | - | - | \$87,520 | - | - | - |
| Largemouth Bass | - | - | - | - | - | - | - | - | - | - |
| Smallmouth Bass | - | - | - | - | - | - | - | - | - | - |
| Alabama Bass | - | - | - | - | - | - | - | - | - | - |

Largemouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|------|------|------|------|------|------|-------|------|------|------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (spring electrofishing) | 7.00 | - | 0.66 | - | 3.00 | - | 3.33 | - | 0.33 | - |
| CPUE (mid-summer seine) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.50 | 0.00 | 0.00 | 0.50 |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | - | - | 47 | - | 77 | - | 62.5 | - | 82.3 | - |
| RSD (preferred) | 8.0 | - | 22.0 | - | 45.0 | - | 26.0 | - | 24.0 | - |
| CPUE (total) | 21.0 | - | 17.3 | - | 18.7 | - | 33.0 | - | 11.7 | - |
| CPUE \geq Stock | 21.0 | - | 16.7 | - | 15.7 | - | 29.3 | - | 6.1 | - |
| CPUE \geq MLL (15-inches) | 9.7 | - | 7.3 | - | 7.0 | - | 7.7 | - | 1.7 | - |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 83.2 | - | 89.7 | - | 91.4 | - | 86.5 | - | 89.7 | - |
| Quality | 84.5 | - | 81.5 | - | 85.8 | - | 84.5 | - | 85.2 | - |
| Preferred | 83.3 | - | 81.2 | - | 83.0 | - | 89.0 | - | 86.9 | - |
| Memorable | 81.5 | - | 83.4 | - | 91.0 | - | 80.9 | - | 87.5 | - |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate, num./hr (intended) | - | - | - | - | - | - | - | - | - | - |
| Catch Rate, num.hr (any black bass) | - | - | - | - | - | - | 1.09 | - | - | - |
| Harvest Rate, num./hr (intended) | - | - | - | - | - | - | 0.19* | - | - | - |
| % Released | - | - | - | - | - | - | 85.2% | - | - | - |
| Mean Weight | - | - | - | - | - | - | 2.36 | - | - | - |

* Any black bass

Alabama Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|------|------|------|------|-------|------|-------|-------|------|------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (spring electrofishing) | 7.00 | - | 5.00 | - | 6.67 | - | 3.00 | - | 1.00 | - |
| CPUE (mid-summer seine) | 0.00 | 0.00 | 1.50 | 0.00 | 11.00 | 2.00 | 3.00 | 10.00 | 4.00 | 1.00 |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | - | - | 55 | - | 49 | - | 62.8 | - | 71.8 | - |
| RSD (preferred) | 8 | - | 16 | - | 12 | - | 38 | - | 36 | - |
| CPUE (total) | 21.3 | - | 38.3 | - | 39.3 | - | 48.7 | - | 35.3 | - |
| CPUE \geq Stock | 21.3 | - | 33.3 | - | 32.7 | - | 45.7 | - | 17.9 | - |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 83.2 | - | 79.9 | - | 79.5 | - | 84.7 | - | 86.1 | - |
| Quality | 85.8 | - | 80.7 | - | 81.2 | - | 86.9 | - | 87.7 | - |
| Preferred | 80.5 | - | 80.3 | - | 78.1 | - | 91.2 | - | 85.0 | - |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate, num./hr (intended) | - | - | - | - | - | - | - | - | - | - |
| Catch Rate, num.hr (any black bass) | - | - | - | - | - | - | 1.09 | - | - | - |
| Harvest Rate, num./hr (any black bass) | - | - | - | - | - | - | 0.19 | - | - | - |
| % Released | - | - | - | - | - | - | 85.8% | - | - | - |
| Mean Weight | - | - | - | - | - | - | 1.35 | - | - | - |

Black Crappie

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|------|------|------|---------|--------|--------|--------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | | | | | | | | | | 0.00 |
| CPUE (midsummer seine) | | | | | | | | 2.0 | 0 | 0 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | | | | | | | | | | 92 |
| RSD (preferred) | | | | | | | | | | 92 |
| CPUE (total) | | | | | 3.3 | | | | | 11.2 |
| CPUE ≥ Stock | | | | | | | | | | 7.8 |
| CPUE ≥ MLL (10-inches) | | | | | | | | | | 6.1 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | | | | | | - |
| Length Age-3 | | | | | | | | | | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | | | | | | | | | | 87.8 |
| Quality | | | | | | | | | | 82.8 |
| Preferred | | | | | | | | | | 88.9 |
| Memorable | | | | | | | | | | 79.6 |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | | | | | | | | | | - |
| Stocking | | | | | | | | | | |
| # Black & BNC mix | - | - | - | - | - | - | 23,152 | 70,990 | 38,440 | 43,151 |
| #/Acre | - | - | - | - | - | - | 12.25 | 37.56 | 20.30 | 22.83 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | - | - | - | - | - | - | 1,486 | - | - | - |
| Angler Hours/Acre | - | - | - | - | - | - | 0.79 | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | - | - | - | - | - | - | 1.30 | - | - | - |
| Harvest Rate (any crappie) | - | - | - | - | - | - | 0.67 | - | - | - |
| % Released (black crappie) | - | - | - | - | - | - | 58.1% | - | - | - |
| Mean Weight (black crappie) | - | - | - | - | - | - | 0.80 | - | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | - | - | - | - | - | - | \$3,560 | - | - | - |

White Crappie

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|------|------|------|---------|------|------|------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | | | | | | | | | | 0.00 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | | | | | | | | | | 0 |
| RSD (preferred) | | | | | | | | | | 0 |
| CPUE (total) | | | | | | | | | | 0.0 |
| CPUE ≥ Stock | | | | | | | | | | 0.0 |
| CPUE ≥ MLL (10-inches) | | | | | | | | | | 0.0 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | | | | | | - |
| Length Age-3 | | | | | | | | | | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | | | | | | | | | | - |
| Quality | | | | | | | | | | - |
| Preferred | | | | | | | | | | - |
| Memorable | | | | | | | | | | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | | | | | | | | | | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | - | - | - | - | - | - | 1,486 | - | - | - |
| Angler Hours/Acre | - | - | - | - | - | - | 0.79 | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | - | - | - | - | - | - | 1.30 | - | - | - |
| Harvest Rate (any crappie) | - | - | - | - | - | - | 0.67 | - | - | - |
| % Released (w hite crappie) | - | - | - | - | - | - | 59.6% | - | - | - |
| Mean Weight (w hite crappie) | - | - | - | - | - | - | 0.79 | - | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | - | - | - | - | - | - | \$3,560 | - | - | - |

Non-target sample unless otherwise noted.

Walleye

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|------|------|------|------|------|------|--------|
| Recruitment (gill netting) | | | | | | | | | | |
| Substock CPUE | - | - | - | - | - | - | - | - | - | - |
| CPUE (mid-summer seine) | - | - | - | - | - | - | - | - | - | - |
| Density (gill netting) | | | | | | | | | | |
| PSD | - | - | - | - | - | - | - | - | - | - |
| RSD (preferred) | - | - | - | - | - | - | - | - | - | - |
| CPUE (total) | - | - | - | - | - | - | - | - | - | - |
| CPUE > Stock | - | - | - | - | - | - | - | - | - | - |
| CPUE ≥ MLL (16-inches) | - | - | - | - | - | - | - | - | - | - |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (gill netting) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | - | - | - | - | - | - | - |
| Preferred | - | - | - | - | - | - | - | - | - | - |
| Memorable | - | - | - | - | - | - | - | - | - | - |
| Mortality (gill netting) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | - | - | - | - | - | - | - | - | - | 20,726 |
| #/Acre | - | - | - | - | - | - | - | - | - | 11.0 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | - | - | - | - | - | - | - | - | - | - |
| Angler Hours/Acre | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | - | - | - | - | - | - | - | - | - |
| Harvest Rate (intended) | - | - | - | - | - | - | - | - | - | - |
| % Released | - | - | - | - | - | - | - | - | - | - |
| Mean Weight | - | - | - | - | - | - | - | - | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Walleye | - | - | - | - | - | - | - | - | - | \$0 |

Yellow Perch

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|------|------|------|------|------|------|-------|
| Recruitment (mid-summer sein) | | | | | | | | | | |
| Substock CPUE | | | | | | | | | | 0.00 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | | | | | | | | | | 63 |
| RSD (preferred) | | | | | | | | | | 18 |
| CPUE (total) | | | | | | | | | | 144.9 |
| CPUE > Stock | | | | | | | | | | 142.5 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | | | | | | - |
| Length Age-3 | | | | | | | | | | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | | | | | | | | | | 67.8 |
| Quality | | | | | | | | | | 65.3 |
| Preferred | | | | | | | | | | 65.9 |
| Memorable | | | | | | | | | | 70.2 |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | | | | | | | | | | - |
| Stocking | | | | | | | | | | |
| # | | | | | | | | | | 0 |
| #/Acre | | | | | | | | | | 0.0 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | | | | | | | | | | - |
| Angler Hours/Acre | | | | | | | | | | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | | | | | | | | | | - |
| Harvest Rate (intended) | | | | | | | | | | - |
| % Released | | | | | | | | | | - |
| Mean Weight | | | | | | | | | | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Yellow Perch | | | | | | | | | | - |

Bluegill

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|---------|---------|------|------|---------|-------|-------|------|------|--------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (electrofishing) | | | | | 0.33 | | | | | - |
| CPUE (mid-summer seine) | 9.00 | 5.00 | 4.50 | 5.00 | 11.00 | 14.50 | 7.00 | 6.50 | 2.00 | 12.00 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | | | | | 56 | | | | - | - |
| RSD (preferred) | | | | | 6 | | | | - | - |
| CPUE (total) | | | | | 33.3 | | | | - | - |
| CPUE \geq Stock | | | | | 33.0 | | | | - | - |
| CPUE \geq Preferred | | | | | 2.0 | | | | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | | | | | - | - |
| Length Age-3 | | | | | | | | | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | | | | | | | | | - | - |
| Quality | | | | | | | | | - | - |
| Preferred | | | | | | | | | - | - |
| Memorable | | | | | | | | | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | | | | | | | | | - | - |
| Stocking | | | | | | | | | | |
| # | 127,477 | 248,966 | - | - | 102,352 | - | - | - | - | 4,338* |
| #/Acre | 67.45 | 131.73 | - | - | 54.44 | - | - | - | - | 2.30 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all sunfish) | - | - | - | - | - | - | 90 | - | - | - |
| Angler Hours/Acre | - | - | - | - | - | - | 0.05 | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any sunfish) | - | - | - | - | - | - | 2.00 | - | - | - |
| Harvest Rate (any sunfish) | - | - | - | - | - | - | 0.00 | - | - | - |
| % Released (bluegill) | - | - | - | - | - | - | 75.7% | - | - | - |
| Mean Weight (bluegill) | - | - | - | - | - | - | 0.26 | - | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Sunfish | - | - | - | - | - | - | \$0 | - | - | - |

Non-target sample unless otherwise noted.

Note: * Represents bluegill/redear mix

Redear

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|---------|------|---------|------|------|------|-------|------|--------|--------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (electrofishing) | | | | | | | | | - | - |
| CPUE (mid-summer seine) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | - | 0.00 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | | | | | | | | | - | - |
| RSD (preferred) | | | | | | | | | - | - |
| CPUE (total) | | | | | | | | | - | - |
| CPUE ≥ Stock | | | | | | | | | - | - |
| CPUE ≥ MLL (10-inches) | | | | | | | | | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | | | | | - | - |
| Length Age-3 | | | | | | | | | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | | | | | | | | | - | - |
| Quality | | | | | | | | | - | - |
| Preferred | | | | | | | | | - | - |
| Memorable | | | | | | | | | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | | | | | | | | | - | |
| Stocking (bluegill/redear mix) | | | | | | | | | | |
| # | 177,276 | - | 336,396 | - | - | - | - | - | 56,000 | 92,120 |
| #/Acre | 93.80 | - | 177.99 | - | - | - | - | - | 29.62 | 48.70 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all sunfish) | - | - | - | - | - | - | 90 | - | - | - |
| Angler Hours/Acre | - | - | - | - | - | - | 0.05 | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any sunfish) | - | - | - | - | - | - | 2.00 | - | - | - |
| Harvest Rate (any sunfish) | - | - | - | - | - | - | 0.00 | - | - | - |
| % Released (redear) | - | - | - | - | - | - | 40.2% | - | - | - |
| Mean Weight (redear) | - | - | - | - | - | - | 0.38 | - | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Sunfish | - | - | - | - | - | - | \$0 | - | - | - |

Non-target sample unless otherwise noted.

Shad

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------|------|------|------|------|------|------|------|-------|------|------|
| Density (Electrofishing) | | | | | | | | | | |
| Alewife CPUE | | | | | | | | | - | - |
| Gizzard CPUE | | | | | | | | | - | - |
| Threadfin CPUE | | | | | | | | | - | - |
| Blueback CPUE | | | | | | | | 0.25* | - | - |

*note: 5 nets were sets 4/23/14 to detect the presence of blueback herring. One net was tampered with, and 5 fish were collected in the other four over a 17 hour set.

Habitat Enhancement - 2016

| Type of Work | Details | Quantity | |
|----------------|---------|----------|-----------|
| | | New | Renovated |
| None performed | | | |
| | | | |

Water Quality Monitoring - 2016

| Parameter | Sampling Period | Water Quality |
|------------------|-----------------|---------------|
| Temperature | none performed | |
| Dissolved Oxygen | | |
| PH | | |
| Conductivity | | |

Watts Bar Reservoir (2016 Annual Report)

Description

Area (acres): 39,600

Mean Depth (feet):

Shoreline (miles): 722

Counties: Rhea, Meigs, Roane, and Loudon

Total Fishing Effort (angler hours): 256,241

Total Value by Anglers: \$1,653,230

Summary:

Largemouth bass (LMB): Largemouth bass fishing at Watts Bar Reservoir continues to be good overall. The electrofishing surveys conducted in the spring of 2016 shows good year class strengths of LMB collected. Spring black bass electrofishing surveys are conducted every other year on Watts Bar thus the next survey is scheduled for 2018, the previous being done in 2014. In those 2014 electrofishing surveys, overall CPUE of 35.8 lmb/hour was slightly lower than the 2012 survey, in which 32.4 lmb/hour were collected. The overall CPUE for LMB in the 2016 spring electrofishing surveys were at a ten year low at a rate of 19.6 lmb/hour (See LMB Table below). Mean weights of caught LMB remain very consistent over the past ten years. According to 2016 roving creel surveys, the mean weight of LMB harvested by anglers in 2016 was 3.18 lbs., which is higher than average and the highest in the past ten years. The 2015 mid-summer seining surveys revealed an elevated catch rate (8.80 lmb/seine haul) but this same figure was down to 5.30 lmb/seine haul for the 2016 surveys, which is near average. These seine haul surveys hopefully show consistent spawning with the most recent surveys. The catch rates for substock LMB have been stable and at favorable levels over the past ten years.

Since the early 1990's the absence or minimal presence of aquatic vegetation continues to be a limiting factor as it applies to available habitat in Watts Bar Reservoir. In the late 1980's Eurasian water milfoil had a strong presence in this reservoir and correlated higher densities of largemouth bass. Currently various species of aquatic vegetation (both native and nonnative) have been documented within Watts Bar Reservoir. Aquatic vegetation presence at Watts Bar currently provides a stage for conflict between lake front owners and fishermen in regards to the desire for eradication or protection depending on the user group. Prolific forage bases of shad species (gizzard and threadfin) at Watts Bar have promoted good populations of black bass as well as other gamefish. Hopefully, favorable spawning conditions will be realized on a consistent basis allowing for continued sustainable populations of largemouth bass.

In 2015 a Florida largemouth bass (FLMB) stocking program was launched in Watts Bar Reservoir. There were three main stocking sites (Piney embayment @ Rhea Springs, Big Springs in Meigs Co, and Caney Creek) selected for stocking the FLMB fingerlings. Because Watts Bar has minimal amounts of habitat conducive to juvenile fish survival, these sites were enhanced with rows of brush to promote hiding places for the juvenile fish once released. Annual stockings of FLMB will be repeated for the next several years. These sites are located in the mid to lower end of the reservoir and incorporate a multitude of different habitat types for adult and sub-adult bass. Ongoing data surveys (i.e. electrofishing, genetics, and creel) will be conducted during this process to evaluate the success of this project. There were a total of 137,439 FLMB fingerlings stocked into Watts Bar in 2015 between the 3 sites mentioned. In 2016 there were 93,430 FLMB fingerlings stocked amongst these same three sites.

Smallmouth bass (SMB): Smallmouth bass have been surveyed with semi-annual spring electro-fishing black bass surveys and also in targeted SMB night surveys. The smallmouth bass fishery in Watts Bar

Reservoir is held in high regards by the fishing public. Since the onset of the 18" minimum size limit, 5 bass/day on smallmouth bass at Watts Bar, the population has responded well with observed increases in abundance of SMB up to the 18" minimum length limit (MLL). High fishing pressure and associated mortality are most likely responsible for the cropping off of SMB greater than 18" as is evident in length frequency graphs from electrofishing data collections. Originally, TWRA recommended a one or two fish limit at an 18" MLL but due to public opposition from the tournament angling community, it was raised to a creel of five by the TFWC.

The targeted SMB surveys are usually conducted in early April, at night, and on rocky banks in the main TN River area on the lower end and mid-section (White's Creek) areas of Watts Bar Reservoir. The overall catch rate for the targeted samples conducted in 2015 was 21.3 smb/hour, the lowest recorded in the past ten years. In this same 2015 survey, catch rates (0.6 smb/hour) for SMB greater than 18" in both electrofishing surveys remain low although some of this may be attributed to limitations of electrofishing gear. The highest of these catch rates was 3.6 smb/hour observed in a targeted sample in 2009 although the catch rate for 2011 was close at 3.2 smb/hour. Condition factors for SMB in the quality to memorable size range were satisfactory although lower than 3 previously like surveys in past years. Watts Bar has an abundant forage base of shad (gizzard and threadfin) that consistently lend to good condition factors for black bass at Watts Bar as well as other gamefish. There is great concern for the smallmouth bass fishery at Watts Bar in regards to likely ramifications by the now confirmed presence of Alabama bass within this reservoir. See "NOTE" below the spotted bass summary.

Spotted bass (SPB): According to the spring electro-fishing surveys conducted over the past ten years at Watts Bar Reservoir, CPUE (fish/hour) for spotted bass have decreased to being non-existent in the spring 2014 black bass electrofishing surveys. Other reservoirs in Region 3 along the TN River are experiencing this same trend with spotted bass according to creel and electrofishing surveys. One possible explanation for this decline could be from a change in water levels due to TVA's Reservoir Operations Study (ROS), instituted in 2008, plan which delays the summertime fill to May 15 instead of the traditional April 15. This ROS plan has potentially compromised spawning success and preferred nesting sites for spotted bass. Of the SPB that have been collected in the past, relative weights (Wrs) are satisfactory. Spotted bass in Watts Bar Reservoir have a tendency to be less numerous and smaller in size than some other region 3 reservoirs like Center Hill and neighboring Chickamauga Reservoir. For these reasons, it is not anticipated that Watts Bar Reservoir will be a high destination for targeted SPB fishing and a special watch should be extended towards monitoring this native fishery in Watts Bar and other mainstem reservoirs along the TN River. A small representation of SPB did show up in the 2015 mid-summer seining surveys at a CPUE of 0.20 spb/seine haul. No spotted bass were collected in the 2016 seining surveys. Caution should be accompanied with this seining data due to the possibility that these juvenile fish could have been Alabama bass. See "NOTE" below. No potential juvenile spotted bass were collected in these same 2016 data collections.

NOTE: In 2014 there were some suspicious looking "spotted bass" collected at the White's Creek embayment while conducting spring black bass electrofishing surveys at Watts Bar. These suspect fish were sent off for genetic analysis for species identification. Fears were confirmed when the small sample (10 fish) were confirmed as possessing different levels of Alabama bass genes. These Alabama bass were likely transported to Watts Bar by fishermen trying to enhance the bass fishery there, which has long been rumored to be the case. The bad news is that Alabama bass have been well documented to cause declines in native largemouth bass and especially smallmouth bass were Alabama bass have been introduced (i.e. Upper Georgia reservoirs). Careful monitoring of the Alabama bass distribution and abundance will be imperative at Watts Bar although little can be done at this time or perhaps in the future. Awareness of stocking illegal fish and specifically Alabama bass has been highlighted in the TWRA

annual fishing regulation publications. Alabama bass were first observed in Tennessee at Parksville Reservoir in 2001.

Crappie: Watts Bar provides a good crappie fishery with opportunities for both white and black crappie. Recent creel surveys show that crappie harvests from Watts Bar are nearly even amongst black crappie and white crappie. Traditionally, especially in the 1980's, white crappie were the dominant species of crappie caught supported by the large year classes produced at Watts Bar. As with some other reservoirs, in Tennessee and out of state, white crappie population numbers have decreased and black crappie have increased, especially in reservoirs where the water clarity has improved which has proven to be more conducive to black crappie. According to the fall trapnetting surveys conducted in 2010, white crappie had great spawning success that year. Not since 2003 has a year class this large been realized. Large spring rain events were most likely the cause for great year classes in 2003 and 2010. Fall trapnetting surveys conducted on Watts Bar in 2014 and 2015 revealed fair catch rates for white crappie at 2.40 and 2.69 white crappie/net night respectively. The 2016 fall netting survey yielded NO white crappie. However, the year 2010 (high water spring) exhibited 12.4 white crappie/net night. In contrast, black crappie representation in the 2014, 2015, and 2016 fall trapnetting surveys were non-existent which has been an ongoing trend over the past ten years. Water fluctuations in the spring are the likely culprit for failed spawning attempts by crappie at Watts Bar. Blacknose crappie (BNC) have been stocked in middle (White's Creek) and lower (Piney Creek) embayments in hopes of offsetting poor years of black crappie recruitment in Watts Bar since 2010 with the exception of 2013. An additional motive for stocking these BNC has been to produce adult BNC which can be used for brood fish within the hatchery system at Sugar Creek and Hiwassee fish ponds which are in close proximity to Watts Bar Reservoir. Several brood blacknose crappie have been collected from Watts Bar over the past couple of years. The year 2013 was a productive year for crappie anglers on Watts Bar Reservoir due to the elevated spawning success in 2010. This 2010 year class continues to be represented in the creel harvest. Anglers fishing for crappie in Watts Bar expended an estimated \$81,550 in 2016 according to roving creel surveys which is down from previous years. Additionally, creel surveys show that catch rates for crappie at Watts Bar have remained fairly stable over the past ten years.

Redear: When compared to other redear sunfish fisheries in other Tennessee reservoirs, Watts Bar is not a high destination for anglers seeking redear angling opportunities. This is because the densities of redear sunfish are not comparable to neighboring reservoirs like Chickamauga, which lies directly downstream. According to roving creel surveys, low average catch rates have been realized over the past ten years for redear sunfish at Watts Bar. Also, redear sunfish have made a minimal presence in the mid-summer seining surveys. Redear sunfish will likely be caught by anglers in pursuit of bluegill and those who fish some of the few historic redear nesting sites. The average weight for a harvested redear from Watts Bar in 2016 was 0.38 lb. Redear were not well represented in the fall crappie trapnetting surveys (0.20 redear/net night). Anglers specifically looking to catch redear will probably engage in a trip to neighboring Chickamauga Reservoir or further downstream to Nickajack Reservoir.

Bluegill: Good bluegill populations, known more for abundance than quality size, provide ample opportunity for angling on Watts Bar Reservoir. Overall the mid-summer seining surveys reflect consistent spawning success for bluegill here although samples taken in 2014 were at a ten year low (2.70 bluegill/seine haul) but rebounded in 2015 to a CPUE of 16.1 bluegill/seine haul and this same figure near average in the 2016 surveys at 7.30. Bluegill were well represented in the 2015 fall trapnetting surveys at a CPUE of 6.7 bluegill/net night and increased to a CPUE of 14.9 in 2016. Expectations for sustained bluegill populations are expected for Watts Bar Reservoir. Bluegill are prolific, often realizing 3 spawns in one year, especially in environments like Watts Bar Reservoir and other neighboring TN River impoundments where bluegill habitat is abundant. There are no current regulations pertaining to size or

creel here and at other reservoirs across the state for that matter. Bluegill populations will continue to be monitored through trapnets, mid-summer seines, creel, and electrofishing surveys.

Sauger: Due to inconsistent and unpredictable sauger spawning success, annual stockings of sauger were recommended to ensure dependable annual year classes of fish. However, it was determined that the close relative of the sauger, walleye, be stocked in Watts Bar instead of sauger in 2011 launching a new TWRA walleye project. Due to the difficulty with culturing sauger and the benefits that would be realized by instead stocking walleye; a walleye stocking program was initiated (see “Walleye” section in this Watts Bar report). In 2014, sauger anglers expended an estimated \$15,540 in pursuit of sauger according to our annual creel surveys and in 2015 there was not enough creel info gathered from sauger anglers to estimate this same figure. Cost estimates were low in 2016 as well showing little pursuit for sauger at Watts Bar. Low catch rates as compared to ten years ago were realized in the 2016 creel surveys (See table below). Most of the historic sauger fishing takes place in the area of Browder shoals upstream to Ft. Loudon Dam. Sauger, which are native to the TN River, are expected to still be represented at some level but much lower than when sauger stocking occurred on an annual basis.

Walleye: A walleye stocking program was implemented at Watts Bar Reservoir in 2011 and walleye fingerlings have been stocked annually in the following years. In 2014, a gillnet survey was conducted on the middle (White’s Creek) and lower sections (Piney River) of Watts Bar where walleye had been stocked. There were 106 walleye collected during this effort representing different year classes and all exhibited excellent condition factors (Wrs). Several walleye were collected exceeding the 16” MLL per statewide regulations. The biggest walleye collected from this 2014 sample was 24.1 inches and weighed 6.5 pounds. Walleye from this survey on average were 17.1 inches long at age 3 according to data obtained from otoliths. Anglers have been very supportive and excited regarding this new project which replaced historic sauger stocking regimes at Watts Bar. Reports of anglers catching walleye have been common. As anglers learn the preferred areas of the reservoir in regards to walleye there should be a reflection of increased catch rates in creel surveys. This population and project will continue to be evaluated to determine recruitment, growth, mortality and density. Determination of preferred spawning runs by the walleye, if they are established, will be beneficial to this evaluation as well. There will be a continued request for the stocking of walleye in Watts Bar annually in different sections of the reservoir (Piney Creek embayment, White’s Creek Embayment, Clinch/Emory River, and upper section below Ft. Loudon Dam). There were a total of 232,509 walleye fingerlings stocked into Watts Bar in 2015 and 174,261 walleye fingerlings stocked in 2016. Roving creel surveys conducted in 2015 showed that the average catch rate for walleye had jumped considerably from 0.05 walleye/hour in 2014 to 1.29 walleye/hour in 2015 and 0.82 in 2016. The average weight for walleye that were harvested in 2016 was 1.96 lb. up slightly from 2015 reflecting walleye being harvested right at the legal size of 16 inches.

Catfish: Fishing for catfish utilizing a variety of methods (trotlines, rod & reel, jugs, noodling, etc.) remains popular on Watts Bar Reservoir. Ample numbers of blue, channel, and flathead catfish provide great angling opportunity here. An estimated \$79,940 was spent while pursuing catfish in 2016 according to the roving creel surveys. Catfish harvest from Watts Bar is represented as the majority being blue catfish and channel catfish as the second most harvested. It is predicted that catfish angling here will remain positive in the respects of pursuit and the success thereof as data shows great consistency with angling hours expended in pursuit of catfish at Watts Bar although this figure was below average in 2016 at 0.57 angler hours/acre. The average catch rate for anglers pursuing catfish at Watts Bar was 1.78 catfish/hour, slightly above the ten year average. Unlike neighboring Chickamauga Reservoir, there is no commercial fishing allowed at Watts Bar which could have an impact on catfish populations.

Striped bass: Striped bass fishing continues to be a very popular endeavor on Watts Bar Reservoir. Many out of state guide services in pursuit of striped bass can be observed in striped bass waters such as below Fort Loudon Dam (Watts Bar head waters). Striped bass are stocked annually at Watts Bar. Striped bass have flourished at Watts Bar due to ample dissolved oxygen, thermal refuges, and abundant forage bases (gizzard and threadfin shad, skipjack herring). Striped bass were first stocked into Watts Bar in 1964 and has been part of a long tradition ever since. It is estimated from the 2016 creel surveys that \$151,940 was expended this same year in the pursuit of striped bass. The tailwater area (below Ft. Loudon Dam) continues to be the area of the greatest angling success for striped bass. In 2016 the average weight of harvested striped bass was 19.53 pounds which is above average for Watts Bar caught striped bass. Angling effort has remained consistent for anglers in pursuit of striped bass at Watts Bar justifying ongoing stocking allocations there.

Lakewide Creel Results

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------|
| Angling Pressure | | | | | | | | | | |
| Angler Hours | 442,133 | 514,776 | 437,960 | 471,088 | 466,016 | 472,307 | 383,910 | 329,671 | 657,864 | 256,241 |
| Angler Hours Per Acre | 11.31 | 13.17 | 11.2 | 12.05 | 11.92 | 12.08 | 9.82 | 8.43 | 16.8 | 6.56 |
| Angler Trips | 69,522 | 82,544 | 68,304 | 72,130 | 74,241 | 79,606 | 65,960 | 52,290 | 102,485 | 42,168 |
| Value of Fishery (angler expenditures creel) | | | | | | | | | | |
| All Species | \$1,600,360 | \$2,029,290 | \$1,614,740 | \$1,702,200 | \$1,874,550 | \$1,706,080 | \$1,054,860 | \$1,155,120 | \$1,784,010 | \$810,120 |

Black Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|-------------|-------------|-------------|-------------|-------------|-----------|-------------|-----------|-----------|-----------|
| Angling Pressure | | | | | | | | | | |
| All Black Bass (hrs) | 197,176 | 246,372 | 204,511 | 202,084 | 194,330 | 195,972 | 135,026 | 117,057 | 296,341 | 126,172 |
| (hrs/acre) | 4.98 | 6.22 | 5.16 | 5.10 | 4.91 | 5.01 | 3.45 | 2.99 | 7.58 | 3.23 |
| Any Black Bass (hrs) | 197,176 | 245,760 | 204,015 | 201,792 | 194,330 | 195,972 | 135,026 | 117,057 | 296,341 | 126,172 |
| (hrs/acre) | 4.98 | 6.21 | 5.15 | 5.10 | 4.91 | 5.01 | 3.45 | 2.99 | 7.58 | 3.23 |
| Largemouth Bass (hrs) | - | 251 | 496 | 292 | - | - | - | 1,212 | - | - |
| (hrs/acre) | - | 0.01 | - | 0.01 | - | - | - | 0.03 | - | - |
| Smallmouth Bass (hrs) | - | 361 | - | - | - | - | - | - | - | - |
| (hrs/acre) | - | 0.01 | - | - | - | - | - | - | - | - |
| Spotted Bass (hrs) | - | - | - | - | - | - | - | - | - | - |
| (hrs/acre) | - | - | - | - | - | - | - | - | - | - |
| Tournaments (all black bass) | | | | | | | | | | |
| # Tournaments (BITE) | 35 | - | - | - | - | - | - | - | - | - |
| Pounds/Angler Day (BITE) | 2.8 | - | - | - | - | - | - | - | - | - |
| Bass/Angler Day (BITE) | 0.9 | - | - | - | - | - | - | - | - | - |
| Tournament Angler Hrs/Acre (creel) | - | - | - | - | - | - | - | - | - | - |
| Tournament Catch Rate (creel) | 0.34 | 0.99 | 1.68 | 1.31 | 0.71 | 1.02 | 1.05 | 1.34 | 0.69 | 0.94 |
| Non-Tournament Catch Rate (creel) | 0.84 | 0.93 | 0.95 | 0.68 | 0.68 | 0.76 | 0.82 | 0.52 | 0.95 | 0.59 |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| All Black Bass | \$1,447,500 | \$2,093,030 | \$1,908,330 | \$1,538,330 | \$1,465,590 | \$923,890 | \$1,003,780 | \$842,750 | \$777,010 | \$377,480 |
| Any Black Bass | \$865,210 | \$2,088,570 | \$1,902,810 | \$1,535,960 | \$1,465,590 | \$923,890 | \$1,003,780 | \$842,750 | \$777,010 | \$377,480 |
| Largemouth Bass | - | \$2,370 | \$5,520 | \$2,370 | - | - | - | \$14,080 | \$14,150 | - |
| Smallmouth Bass | - | \$2,090 | - | - | - | - | - | - | - | - |
| Spotted Bass | - | - | - | - | - | - | - | - | - | - |

Largemouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-----------|----------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (spring electrofishing) | - | 12.60 | - | 8.40 | - | 3.00 | - | 2.29 | | 12.20 |
| CPUE (mid-summer seine) | 5.20 | 0.10 | 5.50 | 2.70 | 3.70 | 3.40 | 4.20 | 4.50 | 8.80 | 5.30 |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD (quality) | - | 69 | - | 70 | - | 76 | - | 72 | - | 67 |
| RSD (preferred) | - | 32.0 | - | 21.0 | - | 53.0 | - | 34.0 | - | 33.0 |
| CPUE (total) | - | 91.2 | - | 46.8 | - | 32.4 | - | 35.8 | - | 19.6 |
| CPUE \geq Stock | - | 78.6 | - | 38.4 | - | 29.4 | - | 17.4 | - | 21.4 |
| CPUE \geq MLL (15-inches) | - | 25.0 | - | 8.2 | - | 15.6 | - | 5.7 | - | 7.4 |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | - | 86.0 | - | 96.0 | - | 93.4 | - | 89.4 | - | 91.1 |
| Quality | - | 91.1 | - | 90.9 | - | 93.9 | - | 91.9 | - | 90.6 |
| Preferred | - | 93.7 | - | 90.1 | - | 96.4 | - | 95.7 | - | 93.0 |
| Memorable | - | 96.8 | - | 92.3 | - | 99.5 | - | 99.8 | - | 85.9 |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | - | - | - | | | | | | 187,233** | 93,430** |
| #/Acre | - | - | - | | | | | | 4.8 | 2.4 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate, num./hr (intended) | N/A | 1.75 | 0.29 | 0.48 | N/A | N/A | 0.72 | 0.23 | 0.50 | - |
| Catch Rate, num.hr (any black bass) | 0.88 | 0.92 | 1.06 | 0.75 | 0.66 | 0.76 | 0.97 | 0.68 | 0.96 | 0.67 |
| Harvest Rate, num./hr (intended) | 0.07* | 0.06* | 0.07* | 0.04* | 0.01* | 0.07* | 0.06* | 0.00 | 0.00 | - |
| % Released | 89.8% | 94.1% | 93.4% | 92.4% | 96.0% | 92.4% | 94.9% | 91.2% | 94.8% | 97.2% |
| Mean Weight | 2.74 | 2.91 | 2.79 | 2.80 | 2.66 | 2.46 | 2.98 | 2.94 | 2.85 | 3.18 |

note: * represents any black bass

** represents Florida Largemouth Bass

Smallmouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-------|-------|-------|-------|--------|-------|-------|-------|-------|--------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (spring electrofishing) | - | 1.20 | - | 1.20 | - | 0.20 | - | - | - | - |
| CPUE (mid-summer seine) | 0.30 | 1.00 | 0.70 | 1.40 | 0.10 | 0.50 | 0.30 | 1.80 | 0.40 | 1.40 |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | - | 71 | - | 93 | - | 91 | - | - | - | - |
| RSD (preferred) | - | 29 | - | 57 | - | 55 | - | - | - | - |
| CPUE (preferred) | - | - | - | 1.0 | - | - | - | - | - | - |
| CPUE (total) | - | 2.6 | - | 4.0 | - | 2.4 | - | - | - | - |
| CPUE ≥ Stock | - | 1.4 | - | 2.8 | - | 2.2 | - | - | - | - |
| CPUE ≥ Preferred | - | 0.4 | - | 1.6 | - | 0.2 | - | - | - | - |
| CPUE ≥ MLL (18-inches) | - | - | - | - | - | - | - | - | - | - |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | - | 90.2 | - | 91.2 | - | 88.1 | - | - | - | - |
| Quality | - | 79.7 | - | 79.5 | - | 93.6 | - | - | - | - |
| Preferred | - | - | - | 78.8 | - | 83.4 | - | - | - | - |
| Memorable | - | 90.9 | - | 84.4 | - | 86.5 | - | - | - | - |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate, num./hr (intended) | N/A | 0.00 | N/A | N/A | N/A | N/A | 0.21 | 0.11 | N/A | - |
| Catch Rate, num.hr (any black bass) | 0.88 | 0.92 | 1.06 | 0.75 | 0.66 | 0.76 | 0.97 | 0.68 | 0.96 | 0.67 |
| Harvest Rate, num./hr (intended) | 0.07* | 0.06* | 0.07* | 0.04* | 0.01* | 0.07* | 0.06* | 0.00 | N/A | - |
| % Released | 89.8% | 94.1% | 95.1% | 97.6% | 100.0% | 92.0% | 96.0% | 96.9% | 97.6% | 100.0% |
| Mean Weight | 2.74 | 2.91 | 4.49 | 4.61 | N/A | 3.88 | 3.57 | 3.43 | 4.04 | - |

note: * represents any black bass

Smallmouth Bass (Target Sample)

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | | | 0.29 | | 0.68 | | | - | 0.82 | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | | | 72 | | 73 | | | - | 63 | - |
| RSD (preferred) | | | 46.0 | | 40.0 | | | - | 48.5 | - |
| CPUE (preferred) | | | | | | | | - | 10.4 | - |
| CPUE (total) | | | 25.2 | | 29.0 | | | - | 21.3 | - |
| CPUE \geq Stock | | | 24.9 | | 28.4 | | | - | 11.2 | - |
| CPUE \geq Preferred | | | 11.5 | | 11.5 | | | - | 6.0 | - |
| CPUE \geq MLL (18-inches) | | | 3.6 | | 3.2 | | | - | 0.6 | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | | | | - | - | - |
| Length Age-3 | | | | | | | | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | | | 88.0 | | 98.3 | | | - | 98.1 | - |
| Quality | | | 84.1 | | 92.5 | | | - | 85.0 | - |
| Preferred | | | 86.6 | | 91.0 | | | - | 85.6 | - |
| Memorable | | | 84.8 | | 85.4 | | | - | 83.6 | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | | | | | | | | - | - | - |

Samples taken at night unless otherwise noted.

Spotted Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-------|-------|-------|--------|--------|-------|--------|--------|--------|--------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (spring electrofishing) | - | 3.20 | - | - | - | 0.20 | - | - | - | - |
| CPUE (mid-summer seine) | 0.80 | 3.70 | 0.40 | 0.00 | 0.60 | 0.30 | 0.10 | 1.50 | 0.20 | 0.00 |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | - | 57 | - | - | - | - | - | - | - | - |
| RSD (preferred) | - | 9 | - | - | - | - | - | - | - | - |
| CPUE (total) | - | 10.8 | - | 1.4 | - | 0.4 | - | - | - | - |
| CPUE \geq Stock | - | 7.1 | - | - | - | 0.2 | - | - | - | - |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | - | 92.0 | - | - | - | - | - | - | - | - |
| Quality | - | 95.0 | - | - | - | - | - | - | - | - |
| Preferred | - | 98.0 | - | - | - | - | - | - | - | - |
| Mortality (spring electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate, num./hr (intended) | N/A | N/A | N/A | N/A | N/A | N/A | 0.03 | N/A | N/A | - |
| Catch Rate, num.hr (any black bass) | 0.88 | 0.92 | 1.06 | 0.75 | 0.66 | 0.76 | 0.97 | 0.68 | 0.96 | 0.67 |
| Harvest Rate, num./hr (any black bass) | 0.07 | 0.06 | 0.07 | 0.04 | 0.01 | 0.07 | 0.06 | 0.07 | N/A | 0.02 |
| % Released | 89.8% | 94.1% | 97.1% | 100.0% | 100.0% | 99.6% | 100.0% | 100.0% | 100.0% | 100.0% |
| Mean Weight | 2.74 | 2.91 | 1.30 | N/A | N/A | 1.60 | - | N/A | N/A | - |

Black Crappie

| | 2007 | 2008 | 2009* | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016* |
|-----------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|
| Recruitment (trap netting) | | | | | | | | | | |
| Substock CPUE | 0.04 | 0.00 | 0.00 | 1.13 | | 0.05 | - | - | - | - |
| CPUE (mid-summer seine) | | | | | | | | | 0.4 | 0 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | | - | 63 | | | | 83 | - | - | 98 |
| RSD (preferred) | | - | 44 | | | | 31 | - | - | 84 |
| CPUE (total) | | - | 47.1 | 0.8 | | | 144.4 | - | - | 21.7 |
| CPUE > Stock | | - | 47.1 | | | | 144.0 | - | - | 21.7 |
| CPUE ≥ MLL (10-inches) | | - | 30.5 | | | | 40.3 | - | - | 19.1 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | | - | | | | | | - | - | - |
| Length Age-3 | | - | | | | | | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | | - | 151.0 | | | | - | - | - | 85.8 |
| Quality | | - | 149.8 | | | | - | - | - | 103.7 |
| Preferred | | - | 125.3 | | | | - | - | - | 101.4 |
| Memorable | | - | 145.3 | | | | - | - | - | 96.1 |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | | | | | | | | - | - | - |
| Stocking | | | | | | | | | | |
| # | - | - | - | | | | | 9,629 | - | 0 |
| #/Acre | - | - | - | | | | | 0.25 | - | 0.0 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 43,334 | 44,716 | 45,248 | 45,050 | 60,682 | 61,153 | 86,875 | 52,943 | 83,079 | 24,101 |
| Angler Hours/Acre | 1.09 | 1.13 | 1.14 | 1.14 | 1.53 | 1.56 | 2.23 | 1.35 | 2.13 | 0.62 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 1.78 | 2.44 | 1.32 | 1.69 | 1.64 | 1.96 | 2.79 | 1.75 | 1.74 | 1.87 |
| Harvest Rate (any crappie) | 0.87 | 1.05 | 0.65 | 0.83 | 0.71 | 0.83 | 1.15 | 1.01 | 0.97 | 1.01 |
| % Released (black crappie) | 53.0% | 60.3% | 54.6% | 49.6% | 68.5% | 52.8% | 71.9% | 47.4% | 47.0% | 54.1% |
| Mean Weight (black crappie) | 0.83 | 0.89 | 0.88 | 0.85 | 0.87 | 0.86 | 0.81 | 0.75 | 0.82 | 0.77 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | \$305,650 | \$326,290 | \$375,650 | \$323,020 | \$502,140 | \$168,180 | \$515,060 | \$331,270 | \$216,580 | \$81,550 |

Non-target sample unless otherwise noted.

* Targeted sample.

Blacknose Crappie

| | 2007 | 2008 | 2009* | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|
| Recruitment (trap netting) | | | | | | | | | | |
| Substock CPUE | | | | | | 0.06 | | - | - | |
| Substock CPUE mid-summer sein | | | | | | | | | | 0.3 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | | | | | | | 80 | - | - | - |
| RSD (preferred) | | | | | | | 30 | - | - | - |
| CPUE (total) | | | 3.3 | 0.2 | | | 16.1 | - | - | - |
| CPUE ≥ Stock | | | | | | | 16.1 | - | - | - |
| CPUE ≥ MLL (10-inches) | | | | | | | 4.4 | - | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | | | | - | - | - |
| Length Age-3 | | | | | | | | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | | | | | | | - | - | - | - |
| Quality | | | | | | | - | - | - | - |
| Preferred | | | | | | | - | - | - | - |
| Memorable | | | | | | | - | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | | | | | | | | - | - | - |
| Stocking | | | | | | | | | | |
| # | | | | 139,586 | 79,671 | 161,672 | | 218,050 | 26,283 | 0 |
| #/Acre | | | | 3.5 | 2.0 | 4.1 | | 5.58 | 0.7 | 0.0 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 43,334 | 44,716 | 45,248 | 45,050 | 60,682 | 61,153 | 86,875 | 52,943 | 83,079 | 24,101 |
| Angler Hours/Acre | 1.09 | 1.13 | 1.14 | 1.14 | 1.53 | 1.56 | 2.23 | 1.35 | 2.13 | 0.62 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 1.78 | 2.44 | 1.32 | 1.69 | 1.64 | 1.96 | 2.79 | 1.75 | 1.74 | 1.87 |
| Harvest Rate (any crappie) | 0.87 | 1.05 | 0.65 | 0.83 | 0.71 | 0.83 | 1.15 | 1.01 | 0.97 | 1.01 |
| % Released (blacknose crappie) | 45.1% | 8.0% | 69.6% | 41.3% | 64.9% | 31.8% | - | 47.6% | 50.2% | 38.8% |
| Mean Weight (blacknose crappie) | 1.19 | 1.46 | 1.43 | 0.99 | 1.13 | 1.19 | 1.06 | 0.81 | 0.90 | 0.81 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | \$305,650 | \$326,290 | \$375,650 | \$323,020 | \$502,140 | \$168,180 | \$515,060 | \$331,270 | \$216,580 | \$81,550 |

Non-target sample unless otherwise noted.

* Targeted sample.

White Crappie

| | 2007 | 2008 | 2009* | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016* |
|-----------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|
| Recruitment (trap netting) | | | | | | | | | | |
| Substock CPUE | 0.40 | 0.40 | 0.00 | 12.40 | - | 0.14 | 0.23 | 2.40 | 2.69 | - |
| Substock CPUE (target shock) | | | | | | | | | | 22.69 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | | 100 | 100 | | - | | 74 | 57** | - | 85 |
| RSD (preferred) | | 88 | 87 | | - | | 32 | 57** | - | 70 |
| CPUE (total) | | 11.6 | 26.3 | 4.4 | - | | 254.8 | 2.57** | - | 17.9 |
| CPUE ≥ Stock | | 11.6 | 26.3 | | - | | 254.4 | 0.08** | - | 17.9 |
| CPUE ≥ MLL (10-inches) | | 10.2 | 22.8 | | - | | 71.8 | .06** | - | 14.9 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | | - | | | - | | | - | - | - |
| Length Age-3 | | - | | | - | | | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | | - | - | | - | | - | - | - | 94.4 |
| Quality | | 90.3 | 176.2 | | - | | - | - | - | 100.4 |
| Preferred | | 88.8 | 163.7 | | - | | - | - | - | 107.8 |
| Memorable | | 94.5 | 152.5 | | - | | - | - | - | 101.8 |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | | | - | | | - | - | - |
| Stocking | | | | | | | | | | |
| # | - | - | - | | - | | | - | - | 0 |
| #/Acre | - | - | - | | - | | | - | - | 0.0 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 43,334 | 44,716 | 45,248 | 45,050 | 60,682 | 61,153 | 86,875 | 52,943 | 83,079 | 24,101 |
| Angler Hours/Acre | 1.09 | 1.13 | 1.14 | 1.14 | 1.53 | 1.56 | 2.23 | 1.35 | 2.13 | 0.62 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 1.78 | 2.44 | 1.32 | 7.69 | 1.64 | 1.96 | 2.79 | 1.75 | 1.74 | 1.87 |
| Harvest Rate (any crappie) | 0.87 | 1.05 | 0.65 | 0.83 | 0.71 | 0.83 | 1.15 | 1.01 | 0.97 | 1.01 |
| % Released (w hite crappie) | 42.3% | 59.1% | 48.7% | 51.0% | 56.4% | 62.1% | 63.5% | 47.9% | 45.6% | 55.9% |
| Mean Weight (w hite crappie) | 0.72 | 0.84 | 0.78 | 0.85 | 0.84 | 0.81 | 0.73 | 0.74 | 0.81 | 0.77 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | \$305,650 | \$326,290 | \$375,650 | \$323,020 | \$502,140 | \$168,180 | \$515,060 | \$331,270 | \$216,580 | \$81,550 |

Non-target sample unless otherwise noted.

* Targeted sample.

** Data collected from trap netting

Sauger

| | 2007 | 2008 | 2009 | 2010* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|-------|---------|
| Recruitment (gill netting) | | | | | | | | | | |
| Substock CPUE | | | | 0.00 | | | | - | - | - |
| Density (gill netting) | | | | | | | | | | |
| PSD | | | | 100 | | | | - | - | - |
| RSD (preferred) | | | | 63 | | | | - | - | - |
| CPUE (total) | | | | 9.8 | | | | - | - | - |
| CPUE > Stock | | | | 9.8 | | | | - | - | - |
| CPUE ≥ MLL (15-inches) | | | | 6.1 | | | | - | - | - |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-1 | | | | | | | | - | - | - |
| Length Age-3 | | | | | | | | - | - | - |
| Condition (gill netting) | | | | | | | | | | |
| Stock | | | | | | | | - | - | - |
| Quality | | | | 92.3 | | | | - | - | - |
| Preferred | | | | 93.4 | | | | - | - | - |
| Memorable | | | | 45.4 | | | | - | - | - |
| Mortality (gill netting) | | | | | | | | | | |
| Total Mortality | | | | | | | | - | - | - |
| Stocking | | | | | | | | | | |
| # | 99,301 | 174,339 | 121,100 | 33,725 | - | | | - | - | 0 |
| #/Acre | 2.5 | 4.4 | 3.1 | 0.9 | - | | | - | - | 0.0 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | 10,299 | 9,236 | 12,593 | 10,891 | 12,793 | 11,910 | 1,241 | 1,914 | N/A | 651 |
| Angler Hours/Acre | 0.26 | 0.23 | 0.32 | 0.28 | 0.32 | 0.30 | 0.03 | 0.05 | N/A | 0.02 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 1.37 | 1.95 | 1.40 | 1.37 | 0.76 | 0.81 | 1.81 | 0.15 | N/A | 0.59 |
| Harvest Rate (intended) | 0.44 | 0.24 | 0.39 | 0.40 | 0.28 | 0.23 | 0.36 | 0.09 | N/A | 0.43 |
| % Released | 71.4% | 87.4% | 70.7% | 72.8% | 72.8% | 68.6% | 75.1% | 81.2% | 71.0% | 51.6% |
| Mean Weight | 1.64 | 1.58 | 1.60 | 1.53 | 1.46 | 1.57 | 1.52 | 1.27 | 1.55 | 1.54 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Sauger | \$64,830 | \$75,540 | \$90,340 | \$76,550 | \$54,680 | \$38,230 | \$13,930 | \$15,540 | N/A | \$1,080 |

* These fish were collected by Eagle Bend Fish Hatchery as part of brood fish collections.

Walleye

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|------|---------|---------|---------|----------|----------|----------|
| Recruitment (gill netting) | | | | | | | | | | |
| Substock CPUE | | | | | | | | - | - | - |
| Density (gill netting) | | | | | | | | | | |
| PSD | | | | | | | | - | - | - |
| RSD (preferred) | | | | | | | | - | - | - |
| CPUE (total) | | | | | | | | - | - | - |
| CPUE ≥ Stock | | | | | | | | - | - | - |
| CPUE ≥ MLL (15-inches) | | | | | | | | - | - | - |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-1 | | | | | | | | - | - | - |
| Length Age-3 | | | | | | | | 435.0 | - | - |
| Condition (gill netting) | | | | | | | | | | |
| Stock | | | | | | | | 101.1 | - | - |
| Quality | | | | | | | | 97.7 | - | - |
| Preferred | | | | | | | | 97.3 | - | - |
| Memorable | | | | | | | | - | - | - |
| Mortality (gill netting) | | | | | | | | | | |
| Total Mortality | | | | | | | | - | - | - |
| Stocking | | | | | | | | | | |
| # | | | | | 222,316 | 339,281 | 252,460 | 332,666 | 232,509 | 174,261 |
| #/Acre | | | | | 5.6 | 8.6 | 6.5 | 8.5 | 5.9 | 4.5 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | | | | | | | | 1,925 | 6,444 | 3,691 |
| Angler Hours/Acre | | | | | | | | 0.05 | 0.16 | 0.09 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | | | | | | - | | 0.05 | 1.29 | 0.82 |
| Harvest Rate (intended) | | | | | | - | | 0.00 | 0.50 | 0.47 |
| % Released | | | | | | 81.8% | | 100.0% | 68.7% | 62.4% |
| Mean Weight | | | | | | 1.91 | | N/A | 1.61 | 1.96 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Walleye | | | | | | - | | \$11,160 | \$13,900 | \$13,330 |

Striped Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Recruitment (gill netting) | | | | | | | | | | |
| Substock CPUE | - | 0.05 | | | | | | - | | - |
| CPUE (mid-summer seine) | | | | | | | | | 3 | 0.7 |
| Density (gill netting) | | | | | | | | | | |
| PSD | - | 13 | | | | | | - | - | - |
| RSD (preferred) | - | 2 | | | | | | - | - | - |
| CPUE (total) | - | 0.4 | | | | | | - | - | - |
| CPUE ≥ Stock | - | 0.3 | | | | | | - | - | - |
| CPUE ≥ 15-inches | - | - | | | | | | - | - | - |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-2 | - | - | | | | | | - | - | - |
| Length Age-3 | - | - | | | | | | - | - | - |
| Condition (gill netting) | | | | | | | | | | |
| Stock | - | 99.4 | | | | | | - | - | - |
| Quality | - | 81.8 | | | | | | - | - | - |
| Preferred | - | | | | | | | - | - | - |
| Memorable | - | | | | | | | - | - | - |
| Mortality (gill netting) | | | | | | | | | | |
| Total Mortality | - | | | | | | | - | - | - |
| Stocking | | | | | | | | | | |
| # | 353,983 | | 253,429 | 213,406 | 226,280 | 241,122 | 212,648 | 151,007 | 114,313 | 174,253 |
| #/Acre | 8.9 | 0.0 | 6.4 | 5.4 | 5.7 | 6.1 | 5.4 | 3.9 | 2.9 | 4.5 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | 24,280 | 20,108 | 12,298 | 36,702 | 26,063 | 33,486 | 40,138 | 27,137 | 95,980 | 32,203 |
| Angler Hours/Acre | 0.61 | 0.51 | 0.31 | 0.93 | 0.66 | 0.86 | 1.03 | 0.69 | 2.46 | 0.82 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0.53 | 0.38 | 0.72 | 0.85 | 0.54 | 0.41 | 0.86 | 0.61 | 0.37 | 0.37 |
| Harvest Rate (intended) | 0.14 | 0.11 | 0.23 | 0.08 | 0.02 | 0.01 | 0.12 | 0.07 | 0.11 | 0.06 |
| % Released | 70.2% | 79.1% | 72.9% | 89.7% | 94.9% | 98.2% | 89.8% | 88.5% | 84.0% | 82.1% |
| Mean Weight | 16.30 | 17.50 | 16.59 | 17.29 | 16.63 | 18.45 | 21.19 | 10.68 | 17.04 | 19.53 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Striped Bass | \$161,440 | \$277,270 | \$140,060 | \$436,990 | \$542,880 | \$183,480 | \$335,400 | \$311,090 | \$356,860 | \$151,940 |

Bluegill

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|---------|-------|---------|-------|---------|-------|---------|----------|---------|---------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (electrofishing) | | | | | | | | | | - |
| CPUE (mid-summer seine) | 12.10 | 7.30 | 17.40 | 6.70 | 6.00 | 3.80 | 7.30 | 2.70 | 16.10 | 7.30 |
| Substock CPUE (trap netting) | | | | | | | | 2.65** | 6.738 | 14.9 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | | | | | | | | | - | - |
| RSD (preferred) | | | | | | | | | - | - |
| CPUE (total) | | | | | | | | 3.55** | - | - |
| CPUE \geq Stock | | | | | | | | 0.9** | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | | | | - | - | - |
| Length Age-3 | | | | | | | | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | | | | | | | | - | - | - |
| Quality | | | | | | | | - | - | - |
| Preferred | | | | | | | | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | | | | | | | | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all sunfish) | 860 | - | 241 | N/A | 502 | N/A | 2,672 | 3,999 | 772 | 2,060 |
| Angler Hours/Acre | 0.0 | - | 0.0 | N/A | 0 | N/A | 0.1 | 0.1 | 0.02 | 0.05 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any sunfish) | 8.86 | - | 14.62 | N/A | 0.00 | N/A | 2.24* | 3.26* | 4.62 | 4.29 |
| Harvest Rate (any sunfish) | 3.18 | - | 6.92 | N/A | 0.00 | N/A | 0.29* | .67* | 0.00 | 0.54 |
| % Released (bluegill) | 64.7% | 85.7% | 74.2% | 94.7% | 95.4% | 84.3% | 85.2% | 83.4% | 78.9% | 78.8% |
| Mean Weight (bluegill) | 0.25 | 0.26 | 0.26 | 0.23 | 0.25 | 0.29 | 0.21 | 0.22 | 0.21 | 0.26 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Sunfish | \$2,440 | - | \$2,080 | N/A | \$8,710 | N/A | \$7,560 | \$15,320 | \$1,620 | \$4,240 |

Non-target sample unless otherwise noted.

*Bluegill only

** Data collected from trap netting

Redear

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|---------|------|---------|-------|---------|-------|---------|----------|---------|---------|
| Recruitment | | | | | | | | | | |
| Substock CPUE (electrofishing) | | | | | | | | - | - | - |
| CPUE (mid-summer seine) | 0.20 | 0.00 | 0.10 | 0.00 | 0.80 | 1.30 | 0.10 | - | - | 0.20 |
| Density (electrofishing) | | | | | | | | | | |
| PSD | | | | | | | | - | - | 44 |
| RSD (preferred) | | | | | | | | - | - | 6 |
| CPUE (total) | | | | | | | | - | - | 7.5 |
| CPUE ≥ Stock | | | | | | | | - | - | 7.5 |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | | | | - | - | - |
| Length Age-3 | | | | | | | | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | | | | | | | | - | - | 97.2 |
| Quality | | | | | | | | - | - | 85.3 |
| Preferred | | | | | | | | - | - | 96.2 |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | | | | | | | | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all sunfish) | 860 | N/A | 241 | N/A | 540 | N/A | 2,672 | 3,999 | 772 | 2,060 |
| Angler Hours/Acre | 0.0 | N/A | 0.0 | N/A | 0 | N/A | 0.1 | 0.1 | 0.02 | 0.05 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any sunfish) | 8.86 | N/A | 14.62 | N/A | 0.00 | N/A | 0.14* | .10* | 4.62 | 4.29 |
| Harvest Rate (any sunfish) | 3.18 | N/A | 6.92 | N/A | 0.00 | N/A | 0.05* | .05* | 0.00 | 0.54 |
| % Released (redeer) | | | 6.0% | 39.0% | 0.0% | 26.5% | 47.1% | 60.3% | 0.0% | 30.7% |
| Mean Weight (redeer) | | | 0.43 | 0.34 | 0.60 | 0.31 | 0.35 | 0.32 | 0.35 | 0.38 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Sunfish | \$2,440 | N/A | \$2,080 | N/A | \$8,710 | N/A | \$7,560 | \$15,320 | \$1,620 | \$4,240 |

Non-target sample unless otherwise noted.

*Redear only

Catfish

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all catfish) | 47,615 | 58,667 | 66,758 | 78,566 | 71,031 | 63,895 | 24,176 | 53,113 | 71,841 | 22,269 |
| Angler Hours/Acre | 1.20 | 1.48 | 1.69 | 1.98 | 1.79 | 1.63 | 0.62 | 1.36 | 1.84 | 0.57 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any catfish) | 1.46 | 1.32 | 1.48 | 1.12 | 1.03 | 1.11 | 1.81 | 1.49 | 2.07 | 1.78 |
| Harvest Rate (any catfish) | 0.89 | 0.65 | 0.67 | 0.30 | 0.29 | 0.29 | 0.35 | 0.31 | 0.65 | 0.49 |
| % Released (channel) | 41.4% | 48.0% | 62.2% | 69.4% | 58.1% | 70.1% | 76.1% | 81.7% | 51.9% | 52.4% |
| Mean Weight (channel) | 3.30 | 3.02 | 2.89 | 2.91 | 3.23 | 2.82 | 3.10 | 2.80 | 3.07 | 2.85 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Catfish | \$328,660 | \$405,610 | \$503,670 | \$577,920 | \$399,810 | \$185,020 | \$189,640 | \$412,880 | \$234,620 | \$79,940 |

Shad

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------------------|------|-------|------|------|------|------|------|------|------|-------|
| Density (electrofishing) | | | | | | | | | | |
| Alewife CPUE | | - | | | | - | | - | - | |
| Gizzard CPUE | | 29.2 | | | | 13.2 | | 72.0 | - | 13.0 |
| Gizzard CPUE (mid-summer sein) | | | | | | | | | | 0.3 |
| Threadfin CPUE | | 102.0 | | | | 59.2 | | 9.2 | - | 256.0 |
| Threadfin CPUE (mid-summer sein) | | | | | | | | | | 4.0 |

Habitat Enhancement - 2016

| Type of Work | Details | Quantity | |
|----------------|---------|----------|-----------|
| | | New | Renovated |
| None performed | | | |

Water Quality Monitoring - 2016

| Parameter | Sampling Period | Water Quality |
|------------------|-----------------|---------------|
| Temperature | | |
| Dissolved Oxygen | | |
| PH | | |
| Conductivity | | |

Watts Bar Reservoir Headwater (2016 annual report)

Description

Area: Due to the uniqueness displayed in “tailwater areas”, a more in-depth survey was determined to be a good management tool into the overall evaluation of the reservoir. However, due to drastic differences in flows, habitat, temperature, clarity, etc. these sampling efforts are reported specifically in relation to this “tailwater area” and not the reservoir as a whole. Due to the fact that conditions in this area can fluctuate drastically from day to day as well as hour to hour, thus possibly effecting survey outcomes, it is advised that established long time trends be utilized and considered before making any management observations or recommendations.

This particular study area typically exists between Ft. Loudon Dam down to the location of the mouth of the Little TN River (Tellico Dam) at approximately TN River Mile 601. The majority of the data collections are aimed at black bass and to a lesser extent striped bass at the current time within this study area.

Summary:

Largemouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Recruitment (spring electrofishing) | | | | | | | | | | |
| Substock CPUE | | 6.50 | | | | | | - | - | - |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | | 78 | | | | | | - | - | - |
| RSD (preferred) | | 40.0 | | | | | | - | - | - |
| CPUE (total) | | 34.5 | | | 6.8 | | | - | - | - |
| CPUE \geq Stock | | 28.0 | | | | | | - | - | - |
| CPUE \geq MLL (15-inches) | | 11.3 | | | | | | - | - | - |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | | | | - | - | - |
| Length Age-3 | | | | | | | | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | | 92.3 | | | | | | - | - | - |
| Quality | | 99.1 | | | | | | - | - | - |
| Preferred | | 98.9 | | | | | | - | - | - |
| Memorable | | - | | | | | | - | - | - |

Smallmouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Recruitment (spring electrofishing) | | | | | | | | | | |
| Substock CPUE | | 1.80 | | | | | | - | - | - |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | | 60 | | | | | | - | - | - |
| RSD (preferred) | | 35 | | | | | | - | - | - |
| CPUE (preferred) | | - | | | | | | - | - | - |
| CPUE (total) | | 14.3 | | | 2.5 | | | - | - | - |
| CPUE \geq Stock | | 12.5 | | | | | | - | - | - |
| CPUE \geq Preferred | | 4.2 | | | | | | - | - | - |
| CPUE \geq MLL (18-inches) | | 0.0 | | | | | | - | - | - |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | | | | - | - | - |
| Length Age-3 | | | | | | | | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | | 84.0 | | | | | | - | - | - |
| Quality | | 82.4 | | | | | | - | - | - |
| Preferred | | 90.0 | | | | | | - | - | - |
| Memorable | | 87.4 | | | | | | - | - | - |

Spotted Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------------------------------|------|-------|------|------|------|------|------|------|------|------|
| Recruitment (spring electrofishing) | | | | | | | | | | |
| Substock CPUE | | 0.60 | | | | | | - | - | - |
| Density (spring electrofishing) | | | | | | | | | | |
| PSD | | 53 | | | | | | - | - | - |
| RSD (preferred) | | 13 | | | | | | - | - | - |
| CPUE (total) | | 10.1 | | | 1.4 | | | - | - | - |
| CPUE \geq Stock | | 9.5 | | | | | | - | - | - |
| Growth (spring electrofishing) | | | | | | | | | | |
| Length Age-1 | | | | | | | | - | - | - |
| Length Age-3 | | | | | | | | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | | 92.9 | | | | | | - | - | - |
| Quality | | 96.8 | | | | | | - | - | - |
| Preferred | | 104.3 | | | | | | - | - | - |

Striped Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014* | 2014** | 2015 | 2016 |
|--------------------------------------------|------|------|------|------|------|------|------|-------|--------|------|------|
| Recruitment (spring electrofishing) | | | | | | | | | | | |
| Substock CPUE | | 0.00 | | | | | | - | - | - | - |
| Density (spring electrofishing) | | | | | | | | | | | |
| PSD (quality) | | 42 | | | | | | 100 | 100 | - | - |
| RSD (preferred) | | 17 | | | | | | 67 | 69 | - | - |
| CPUE (total) | | 32.6 | | | 3.6 | | | 2.76 | 35.18 | - | - |
| CPUE \geq Stock | | 32.6 | | | | | | 1.51 | 17.55 | - | - |
| CPUE \geq 15-inches | | 32.6 | | | | | | 1.51 | 17.55 | - | - |
| Growth (spring electrofishing) | | | | | | | | | | | |
| Length Age-2 | | - | | | | | | - | - | - | - |
| Length Age-3 | | - | | | | | | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | | |
| Stock | | - | | | | | | - | - | - | - |
| Quality | | - | | | | | | - | - | - | - |
| Preferred | | - | | | | | | - | - | - | - |
| Memorable | | - | | | | | | - | - | - | - |

note: * sample taken from headwaters below Melton Hill Dam on the Clinch River arm

** sample taken from headwaters below Fort Loudon Dam on the Tennessee River

Watts Bar Angler Attitude Surveys (2016)

Fish management has been described in scientific literature as the management of three vital entities; organisms, habitat and people, all of which are inner linked. Biologists are continually evaluating this trilogy in efforts to better manage specified aquatic resources and thus offer sound management recommendations. For example, the Region 3 Reservoir crew monitors fish populations through such methods as electrofishing, netting, creel surveys, seining, etc. Additionally, we currently have a five year strategic habitat plan which addresses reservoir habitat needs and solutions achieved by various habitat projects. Creel surveys, public meetings, sport fishing comment periods, etc. all aim at obtaining input from the public, whole or in part. These data surveys and projects are vital to the overall management of the aquatic resources within the reservoirs.

Public input can be a very useful tool for biologists in the overall management of a reservoir by defining areas of concern or approval. In an effort to accomplish this, we decided to use our annual roving creel program to be the vehicle to conduct a yearlong angler attitude survey starting in the year 2013. There was no realized added expense with this survey with only an increase of interview time (2-5 minutes). Anglers were asked a series of questions (see questionnaire in Appendix) in addition to routine, state-wide standardized creel questions. Typical creel data will gather such useful data as angling pressure, expenditures, harvest rates, species composition, catch rates, avg size of caught fish, socioeconomics, etc. The goal of the angler attitude survey was to achieve just what the name implies but would reflect actual anglers fishing specified reservoirs rather than general anglers with unspecified destinations or past recollections of trips gone by. Similar statewide surveys have been conducted by University of Tennessee (UT) in the past for TWRA but have been more general and broader in scope with no emphasis placed on a specific reservoir. Often times, minority user groups succeed in representing the sentiment of the angling public when actually it is not the overall view of an unbiased assessment of multiple anglers. The results of the angler attitude survey have already proven to be very informative. Future reservoir management decisions will benefit from this type of insight from anglers.

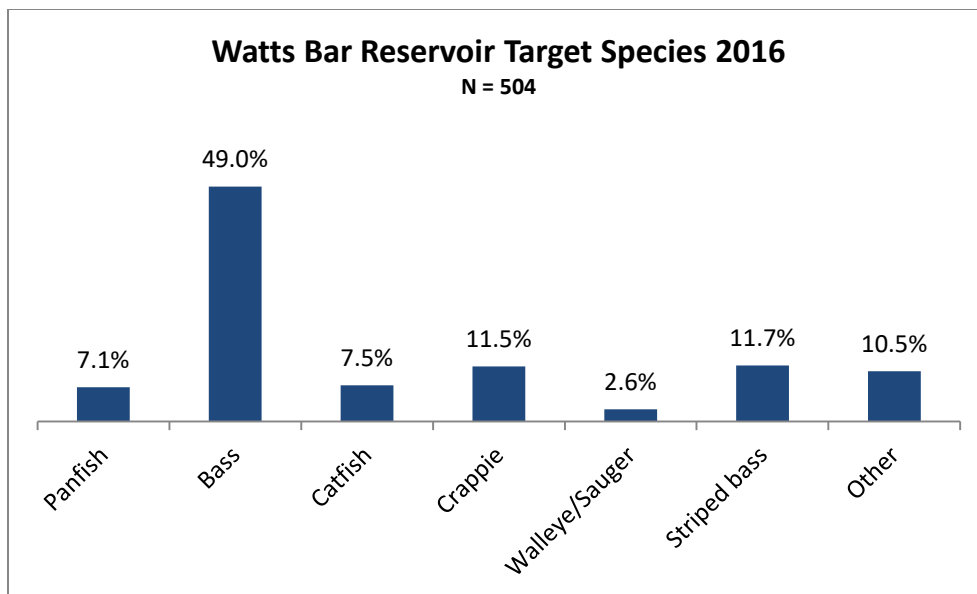
We sampled our angling public with attitude surveys again in 2016 on the four reservoirs in Region 3 that creel surveys were conducted (Center Hill, Chickamauga, Dale Hollow, and Watts Bar Reservoirs). Overall "approval" of Region 3 reservoirs in this 2016 survey is very favorable at the current time according to these 2016 surveys. We feel confident that this summary of our "angler attitudes" will once again provide insight to how these particular reservoirs are evaluated by our angling public. This type information coupled with our biological data should prove to be a good balance when we move forward with management decisions regarding reservoirs in Region 3 as warranted.

This project and overall fish management would not be possible without the dedication of our creel clerks (Danny Stone, Tim Poole) and the Region 3 reservoir fisheries crew.

Results from the Angler Attitude Survey conducted at Watts Bar in 2016 are as follows:

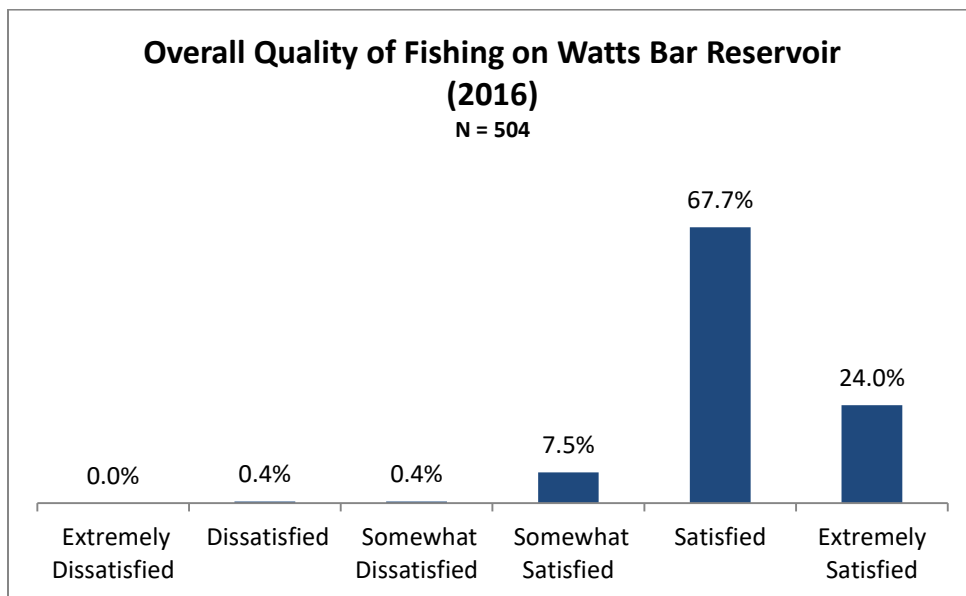
There were a total of 504 anglers who were fishing at Watts Bar Reservoir interviewed by a creel clerk for the angler attitude survey in 2016. This was a roving creel survey performed via boat and this angler attitude survey was collected in conjunction with standardized creel surveys and in accordance with statewide protocol.

The most targeted species of fish by anglers on Watts Bar was bass (49.0%) with crappie and striped bass being the next most sought after game fish (see graph below).



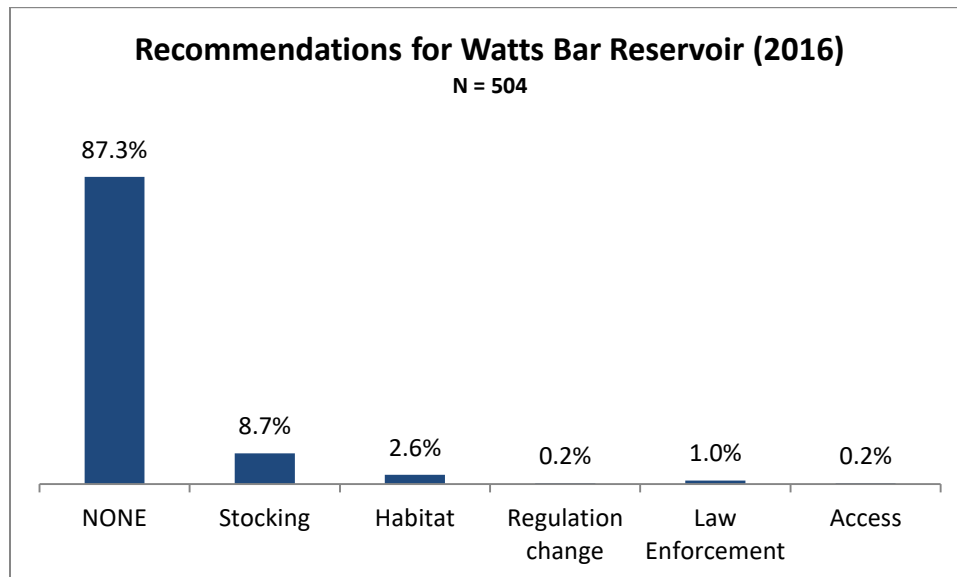
These surveys also revealed that fishermen who identified “Bass” (n=247) as their primary target species, 88.3% (218 bass anglers) also fished bass tournaments. On average, these bass tournament fishermen at Watts Bar Reservoir fished an average of 8.2 bass tournaments/year at Watts Bar Reservoir.

As the graph below depicts, anglers expressed a high satisfaction rating (99.2%) overall when asked about the “overall quality of fishing on Watts Bar Reservoir”.



According to the graph below, when anglers who fish Watts Bar Reservoir were asked if they had any recommendations, the large majority (87.3%) had “NONE” thus indicating approval for TWRA’s management of the fisheries resource at Watts Bar. Anglers who were interviewed listed “stocking” as a concern. Currently at Watts Bar, TWRA stocks striped bass, walleye and black crappie annually. “Habitat” and more specifically the need for aquatic vegetation was also a category for concern for Watts Bar anglers as was also the major area of concern last year with these same interviews. TWRA has no control

over the sustainability or management of aquatic vegetation at Watts Bar Reservoir or any other in Region 3.



Overall, the angler attitudes obtained in 2016 from those fishing at Watts Bar Reservoir are ones that exhibit a high approval for the current fish management of this reservoir by TWRA.

Region 4

Boone Reservoir

Description

| | |
|------------------------------------------------------------|-----------------------------------------------------|
| Surface Area: 4,520 acres | Shoreline Distance: 127 miles |
| Counties: Sullivan, Washington | Drainage Area: 1840 square miles |
| Full Pool Elevation: 1384 feet above mean sea level | Mean Annual Fluctuation: 54 feet |
| Maximum Depth: 122 feet | Thermocline Depth: 7 feet |
| Mean Chlorophyll (Forebay): 10.8 parts per million | Shoreline Development: 13% |
| Trophic Status (Forebay): Mesotrophic | Trophic Index, Carlson (1977): 53.9 |
| Hydraulic Retention Time: 38 days | Reservoir Age: 64 years (dam completed 1952) |
| Total Fishing Effort: No creel in 2016 | Total Value by Anglers: No creel in 2016 |

Summary:

*Boone Reservoir water levels have been held at 10ft below winter pool elevations (1350-1355 feet above mean sea level) since November 2014.

Electrofishing

The 2016 largemouth bass CPUE was a little below average, at 63.0 fish/hour. However, we collected a large percentage (44%) of fish between 10 and 14-inches. These fish should grow bigger in 2017 and recruit into larger size classes, which will increase the percentage of fish over the 15-inch MLL. The largemouth bass relative weights were below average for Boone Reservoir.

Smallmouth bass catch rates were just below average for 2016, at 22.0 fish/hour. There is a large percentage of smallmouth bass between 10 to 14 inches (38%). Hopefully, these fish will recruit into the larger size classes and result in more fish for anglers to catch above the 15-inch MLL. The smallmouth bass relative weights were below average for Boone Reservoir.

Black crappie catch rates for 2016 were about average for Boone Reservoir. We also saw good percentages of crappie between 7 and 10-inches. These fish should recruit into larger size classes and result in more fish over the 10-inch MLL in 2017.

Gill Netting

There was no winter striped bass gill-netting sample conducted in 2016. Data for morones was collected from summer shad gill-netting by catch.

Shad Netting

Shad netting was conducted on Boone Reservoir in September of 2016. A total of five nets were set on the Watauga River arm and a total of five nets were set on the Holston River arm. Three shad species (Gizzard, Threadfin, and Alewife) were collected, weighed, and measured to determine densities and overall health of the shad populations on Boone Reservoir.

Habitat Enhancement

Habitat enhancement work was conducted on Boone Reservoir. The work consisted of hydro-seeding native grasses from a boat on several areas of Boone Reservoir. There was a total of 76.3 acres of native grasses planted in 2016.

Water Quality

Water quality sampling was conducted at three sites on Boone Reservoir during the months of July, August, and September. The water quality samples were all normal for Boone Reservoir.

Lakewide Angling Summary**Total Effort and Expenditures**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Angling Pressure | | | | | | | | | | |
| Angler Hours | 840,985 | no survey | no survey | 147,294 | no survey | no survey | no survey | 132,714 | no survey | no survey |
| Angler Hours Per Acre | 18.6 | no survey | no survey | 32.6 | no survey | no survey | no survey | 29.4 | no survey | no survey |
| Angler Trips | 13,022 | no survey | no survey | 26,804 | no survey | no survey | no survey | 24,087 | no survey | no survey |
| Value of Fishery (angler expenditures creel) | | | | | | | | | | |
| All Species | \$166,960 | no survey | no survey | \$511,340 | no survey | no survey | no survey | \$534,030 | no survey | no survey |

Black Bass, Boone Reservoir**Black Bass**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|---------------------------------------------|--------|--------|-----------|--------|--------|-----------|-----------|--------|-----------|-----------|--------|
| Angling Pressure (creel survey data) | | | | | | | | | | | |
| All Black Bass (hrs) | 49,352 | 86,235 | no survey | 82,967 | 70,850 | no survey | no survey | 82,216 | no survey | no survey | 74,324 |
| (hrs/acre) | 10.9 | 19.1 | no survey | 18.4 | 15.7 | no survey | no survey | 18.2 | no survey | no survey | 16.5 |
| Any Black Bass (hrs) | 47,724 | 84,872 | no survey | 81,263 | 70,007 | no survey | no survey | 81,617 | no survey | no survey | 73,097 |
| (hrs/acre) | 10.6 | 18.8 | no survey | 18.0 | 15.5 | no survey | no survey | 18.1 | no survey | no survey | 16.2 |
| Largemouth Bass (hrs) | 0 | 236 | no survey | 1,055 | 0 | no survey | no survey | 335 | no survey | no survey | 325 |
| (hrs/acre) | 0.0 | 0.1 | no survey | 0.2 | 0.0 | no survey | no survey | 0.1 | no survey | no survey | 0.1 |
| Smallmouth Bass (hrs) | 1,628 | 1,127 | no survey | 649 | 843 | no survey | no survey | 264 | no survey | no survey | 902 |
| (hrs/acre) | 0.4 | 0.2 | no survey | 0.1 | 0.2 | no survey | no survey | 0.0 | no survey | no survey | 0.2 |
| Spotted Bass (hrs) | 0 | 0 | no survey | 0 | 0 | no survey | no survey | 0 | no survey | no survey | 0 |
| (hrs/acre) | 0.0 | 0.0 | no survey | 0.0 | 0.0 | no survey | no survey | 0.0 | no survey | no survey | 0.0 |

Tournaments (BITE program & creel survey data)

| | | | | | | | | | | | |
|--------------------------|---------------|---------------|------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|------|
| # Tournaments (BITE) | | | 7 | | | | | | | | 7 |
| Pounds/Angler Day (BITE) | none reported | none reported | 4.64 | none reported | none reported | none reported | none reported | none reported | none reported | none reported | 4.64 |
| Bass/Angler Day (BITE) | | | 2.17 | | | | | | | | 2.17 |

Value of Fishery (creel survey data - trip expenditures)

| | | | | | | | | | | | |
|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| All Black Bass | \$109,650 | \$319,140 | no survey | \$269,530 | \$265,860 | no survey | no survey | \$300,270 | no survey | no survey | \$252,890 |
| Any Black Bass | \$106,840 | \$304,620 | no survey | \$264,940 | \$262,270 | no survey | no survey | \$297,670 | no survey | no survey | \$247,268 |
| Largemouth Bass | \$0 | \$2,360 | no survey | \$3,400 | \$0 | no survey | no survey | \$1,640 | no survey | no survey | \$1,480 |
| Smallmouth Bass | \$2,810 | \$12,160 | no survey | \$1,190 | \$3,590 | no survey | no survey | \$960 | no survey | no survey | \$4,142 |
| Spotted Bass | \$0 | \$0 | no survey | \$0 | \$0 | no survey | no survey | \$0 | no survey | no survey | \$0 |

Largemouth Bass, Boone Reservoir**Largemouth Bass**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|---------------------------------------------------------------|------|-------|-----------|------|-------|-----------|-----------|------|-----------|-----------|------|
| Recruitment (electrofishing data - CPUE = # fish/hour) | | | | | | | | | | | |
| Age-1 CPUE | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A | N/A | N/A |
| Substock CPUE | 13.0 | 18.0 | 20.0 | 13.5 | 17.7 | 8.0 | no survey | 4.6 | 10.3 | 7.3 | 12.5 |
| Density (electrofishing data - CPUE = # fish/hour) | | | | | | | | | | | |
| PSD | 68% | 72% | 70% | 68% | 76% | 70% | no survey | 83% | 57% | 80% | 72% |
| RSD - Preferred | 46% | 35% | 38% | 30% | 32% | 30% | no survey | 33% | 25% | 31% | 33% |
| CPUE | 58.3 | 108.0 | 95.4 | 99.0 | 110.0 | 70.2 | no survey | 48.3 | 60.3 | 63.0 | 79.2 |
| CPUE ≥ Stock | 44.8 | 89.7 | 75.4 | 85.5 | 92.3 | 62.2 | no survey | 43.7 | 50.0 | 55.7 | 66.6 |
| CPUE ≥ MSL (15") | 19.7 | 28.6 | 24.3 | 22.5 | 24.9 | 14.8 | no survey | 12.3 | 10.3 | 13.7 | 19.0 |
| Growth (electrofishing data) | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A | N/A | N/A |
| Mean TL at Age-3 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A | N/A | N/A |
| Relative Weight (electrofishing data) | | | | | | | | | | | |
| Stock - Quality | 92.3 | 89.5 | 87.5 | 86.5 | 85.9 | 84.2 | no survey | 81.1 | 88.3 | 80.5 | 86.2 |
| Quality - Preferred | 95.2 | 91.8 | 88.9 | 85.3 | 86.3 | 88.0 | no survey | 82.3 | 87.8 | 84.3 | 87.8 |
| Preferred - Memorable | 94.5 | 94.7 | 90.6 | 88.0 | 87.8 | 90.0 | no survey | 86.3 | 89.9 | 82.1 | 89.3 |
| Memorable - Trophy | 92.0 | 93.1 | 96.7 | 83.2 | 89.7 | 101.3 | no survey | 96.4 | 86.4 | 91.9 | 92.3 |
| Trophy | none | none | none | none | none | none | no survey | none | none | none | none |
| Mortality (electrofishing data) | | | | | | | | | | | |
| Total Mortality | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Fishing Success (creel survey data) | | | | | | | | | | | |
| Catch Rate | 0.16 | 0.23 | no survey | 0.32 | 0.36 | no survey | no survey | 0.23 | no survey | no survey | 0.24 |
| Harvest Rate | 0.01 | 0.00 | no survey | 0.01 | 0.01 | no survey | no survey | 0.00 | no survey | no survey | 0.01 |
| Percent Harvested | 6.8% | 1.9% | no survey | 3.3% | 2.1% | no survey | no survey | 2.0% | no survey | no survey | 4.0% |
| Mean Weight (pounds) | 2.84 | 2.76 | no survey | 2.1 | 2.38 | no survey | no survey | 2.44 | no survey | no survey | 2.6 |

Smallmouth Bass, Boone Reservoir**Smallmouth Bass**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|---------------------------------------------------------------|------|------|-----------|------|------|-----------|-----------|------|-----------|-----------|-------|
| Recruitment (electrofishing data - CPUE = # fish/hour) | | | | | | | | | | | |
| Age-1 CPUE | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A | N/A | N/A |
| Substock CPUE | 1.1 | 3.7 | 1.7 | 3.7 | 1.4 | 1.7 | no survey | 4.3 | 2.6 | 4.3 | 2.7 |
| Density (electrofishing data - CPUE = # fish/hour) | | | | | | | | | | | |
| PSD | 79% | 73% | 73% | 54% | 73% | 72% | no survey | 63% | 67% | 79% | 70% |
| RSD - Preferred | 71% | 50% | 55% | 17% | 41% | 43% | no survey | 37% | 40% | 47% | 45% |
| CPUE | 13.1 | 29.4 | 16.3 | 29.0 | 34.3 | 17.1 | no survey | 26.2 | 29.6 | 22.0 | 24.1 |
| CPUE ≥ Stock | 12.0 | 25.7 | 14.6 | 25.3 | 32.9 | 15.4 | no survey | 21.8 | 27.0 | 17.7 | 21.4 |
| CPUE ≥ MSL (15") | 6.0 | 7.4 | 5.4 | 2.8 | 8.0 | 4.8 | no survey | 5.5 | 7.0 | 4.0 | 5.7 |
| Growth (electrofishing data) | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A | N/A | N/A |
| Mean TL at Age-3 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A | N/A | N/A |
| Relative Weight (electrofishing data) | | | | | | | | | | | |
| Stock - Quality | 85.5 | 86.1 | 83.5 | 82.4 | 83.9 | 82.3 | no survey | 79.4 | 81.9 | 74.8 | 82.2 |
| Quality - Preferred | 83.3 | 83.3 | 81.6 | 83.9 | 82.8 | 83.2 | no survey | 80.0 | 80.2 | 77.9 | 81.8 |
| Preferred - Memorable | 82.9 | 83.2 | 81.7 | 79.9 | 84.0 | 83.3 | no survey | 75.3 | 77.9 | 70.0 | 79.8 |
| Memorable - Trophy | 80.6 | 79.8 | 80.6 | 80.5 | 82.9 | 80.9 | no survey | 69.3 | 75.5 | 72.0 | 78.0 |
| Trophy | none | none | none | none | none | none | no survey | none | none | none | none |
| Mortality (electrofishing data) | | | | | | | | | | | |
| Total Mortality | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Fishing Success (creel survey data) | | | | | | | | | | | |
| Catch Rate | 0.14 | 0.21 | no survey | 0.21 | 0.19 | no survey | no survey | 0.16 | no survey | no survey | 0.18 |
| Harvest Rate | 0.01 | 0.00 | no survey | 0.00 | 0.01 | no survey | no survey | 0.01 | no survey | no survey | 0.01 |
| Percent Harvested | 6.5% | 3.6% | no survey | 2.1% | 3.2% | no survey | no survey | 5.3% | no survey | no survey | 4.1% |
| Mean Weight (pounds) | 2.4 | 2.62 | no survey | 3.02 | 2.81 | no survey | no survey | 2.56 | no survey | no survey | 2.682 |

Spotted Bass, Boone Reservoir

| Spotted Bass | | | | | | | | | | | |
|---------------------------------------------------------------|------|-------|-----------|------|------|-----------|-----------|------|-----------|-----------|-------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
| Recruitment (electrofishing data - CPUE = # fish/hour) | | | | | | | | | | | |
| Age-1 CPUE | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A | N/A | N/A |
| Substock CPUE | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 1.1 | no survey | 0.6 | 0.0 | 0.7 | 0.3 |
| Density (electrofishing data - CPUE = # fish/hour) | | | | | | | | | | | |
| PSD | 50% | 100% | 0% | 100% | 58% | 8% | no survey | 38% | 15% | 57% | 47% |
| RSD - Preferred | 0% | 0% | 0% | 0% | 12% | 8% | no survey | 6% | 80% | 4% | 12% |
| CPUE | 0.6 | 2.0 | 2.0 | 0.6 | 7.7 | 4.5 | no survey | 16.0 | 15.3 | 25.7 | 8.3 |
| CPUE ≥ Stock | 0.6 | 2.0 | 2.0 | 0.6 | 7.4 | 3.4 | no survey | 16.6 | 15.3 | 25.0 | 8.1 |
| Growth (electrofishing data) | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A | N/A | N/A |
| Mean TL at Age-3 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A | N/A | N/A |
| Relative Weight (electrofishing data) | | | | | | | | | | | |
| Stock - Quality | 88.6 | none | 101.1 | none | 95.6 | 92.0 | no survey | 92.5 | none | 94.0 | 94.0 |
| Quality - Preferred | 97.7 | 106.6 | none | 91.8 | 94.0 | none | no survey | 88.2 | 113.4 | 87.0 | 97.0 |
| Preferred - Memorable | none | none | none | none | 94.5 | 85.8 | no survey | 97.8 | 107.6 | 81.2 | 93.4 |
| Memorable - Trophy | none | none | none | none | none | none | no survey | none | 94.9 | none | none |
| Trophy | none | none | none | none | none | none | no survey | none | none | none | none |
| Mortality (electrofishing data) | | | | | | | | | | | |
| Total Mortality | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Fishing Success (creel survey data) | | | | | | | | | | | |
| Catch Rate | N/A | 0.01 | no survey | 0.04 | 0.04 | no survey | no survey | 0.07 | no survey | no survey | 0.04 |
| Harvest Rate | N/A | 0.00 | no survey | 0.00 | 0.00 | no survey | no survey | 0.00 | no survey | no survey | 0.00 |
| Percent Harvested | N/A | 0% | no survey | 4.6% | 1% | no survey | no survey | 0.0% | no survey | no survey | 1% |
| Mean Weight (pounds) | N/A | N/A | no survey | 1.65 | 1 | no survey | no survey | N/A | no survey | no survey | 1.325 |

White Crappie, Boone Reservoir**White Crappie**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|-----------------------------------------------------------------|----------|----------|-----------|---------|---------|-----------|-----------|---------|-----------|-----------|----------|
| Recruitment (electrofishing data - CPUE = # fish/ hour) | | | | | | | | | | | |
| Age-0 CPUE | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A | N/A | N/A |
| Substock CPUE | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | no survey | 0.0 | 0 | 0.0 | 0 |
| Density (electrofishing data - CPUE = # fish/ hour) | | | | | | | | | | | |
| PSD | none | 100% | 100% | 100% | 100% | 100% | no survey | 100% | 100% | 100% | 100% |
| RSD - Preferred | none | 100% | 100% | 89% | 0% | 50% | no survey | 0% | 89% | 100% | 66% |
| CPUE | 0.0 | 0.3 | 0.3 | 2.6 | 0.6 | 0.6 | no survey | 0.3 | 3.0 | 0.3 | 0.9 |
| CPUE ≥ Stock | 0.0 | 0.3 | 0.3 | 2.6 | 0.6 | 0.6 | no survey | 0.3 | 3.0 | 0.3 | 0.9 |
| CPUE ≥ MSL (10") | 0.0 | 0.3 | 0.3 | 2.3 | 0.0 | 0.3 | no survey | 0.0 | 2.6 | 0.3 | 0.7 |
| Growth (electrofishing data) | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A | N/A | N/A |
| Mean TL at Age-3 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A | N/A | N/A |
| Relative Weight (electrofishing data) | | | | | | | | | | | |
| Stock - Quality | none | none | none | none | none | none | no survey | none | none | none | none |
| Quality - Preferred | none | none | none | 110.9 | 109.2 | 89.0 | no survey | 102.0 | 113.4 | none | 104.9 |
| Preferred - Memorable | none | none | none | 98.2 | none | none | no survey | none | 107.5 | none | 102.9 |
| Memorable - Trophy | none | 96.7 | 94.2 | 99.4 | none | 100.0 | no survey | none | 94.8 | 93.6 | 96.5 |
| Trophy | none | none | none | none | none | none | no survey | none | none | none | none |
| Mortality (electrofishing data) | | | | | | | | | | | |
| Total Mortality | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Stocking | | | | | | | | | | | |
| # per Acre | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Angling Pressure (creel survey data - any crappie) | | | | | | | | | | | |
| Angler Hours | 8,783 | 8,067 | no survey | 4,367 | 4,669 | no survey | no survey | 3,109 | no survey | no survey | 5,799 |
| Angler Hours/Acre | 1.9 | 1.8 | no survey | 1.0 | 1.0 | no survey | no survey | 0.6 | no survey | no survey | 1.3 |
| Fishing Success (creel survey data) | | | | | | | | | | | |
| Catch Rate | 0.02 | 0.65 | no survey | 0.05 | 0.01 | no survey | no survey | N/A | no survey | no survey | 0.18 |
| Harvest Rate | 0.01 | 0.22 | no survey | 0.01 | none | no survey | no survey | N/A | no survey | no survey | 0.08 |
| Percent Harvested | 79.5% | 30.0% | no survey | 18.2% | none | no survey | no survey | N/A | no survey | no survey | 42.6% |
| Mean Weight (pounds) | 1.08 | 0.81 | no survey | 1.1 | none | no survey | no survey | N/A | no survey | no survey | 1.0 |
| Value of Fishery (creel survey data - trip expenditures) | | | | | | | | | | | |
| Any Crappie | \$13,860 | \$20,710 | no survey | \$7,730 | \$6,850 | no survey | no survey | \$8,990 | no survey | no survey | \$11,628 |

Black Crappie, Boone Reservoir**Black Crappie**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|-----------------------------------------------------------------|----------|----------|-----------|---------|---------|-----------|-----------|---------|-----------|-----------|----------|
| Recruitment (electrofishing data) - CPUE = # fish/ hour) | | | | | | | | | | | |
| Age-0 CPUE | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A | N/A | N/A |
| Substock CPUE | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | no survey | 0.0 | 0.0 | 0.0 | 0.0 |
| Density (electrofishing data - CPUE = # fish/ hour) | | | | | | | | | | | |
| PSD | 100% | 91% | 92% | 90% | 96% | 75% | no survey | 82% | 100% | 100% | 92% |
| RSD - Preferred | 72% | 52% | 44% | 42% | 51% | 33% | no survey | 36% | 81% | 86% | 55% |
| CPUE | 8.3 | 13.1 | 17.4 | 8.9 | 15.1 | 6.9 | no survey | 7.4 | 9.0 | 2.3 | 9.8 |
| CPUE ≥ Stock | 8.3 | 13.1 | 17.4 | 8.9 | 15.1 | 6.9 | no survey | 7.4 | 9.0 | 2.3 | 9.8 |
| CPUE ≥ MSL (10") | 6.0 | 6.6 | 6.9 | 3.1 | 7.4 | 2.0 | no survey | 3.1 | 6.3 | 2.0 | 4.8 |
| Growth (electrofishing data) | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A | N/A | N/A |
| Mean TL at Age-3 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A | N/A | N/A |
| Relative Weight (electrofishing data) | | | | | | | | | | | |
| Stock - Quality | none | 92.8 | 88.0 | 91.9 | 93.1 | 90.0 | no survey | 93.0 | none | none | 91.46 |
| Quality - Preferred | 98.1 | 95.9 | 90.2 | 86.0 | 91.0 | 87.5 | no survey | 85.0 | 92.9 | 83.4 | 89.99 |
| Preferred - Memorable | 90.9 | 92.0 | 89.5 | 89.0 | 88.7 | 87.2 | no survey | 88.3 | 85.7 | 92.3 | 89.28 |
| Memorable - Trophy | 89.6 | 86.5 | 87.7 | 77.8 | 87.5 | 81.6 | no survey | 83.0 | 79.9 | 81.2 | 83.87 |
| Trophy | none | none | none | none | none | none | no survey | none | none | none | none |
| Mortality (electrofishing data) | | | | | | | | | | | |
| Total Mortality | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Stocking | | | | | | | | | | | |
| # per Acre | 6.1 | 10.6 | 10.7 | 0.0 | 10.4 | 10.8 | 13.9 | 9.8 | 5.0 | | 8.6 |
| Angling Pressure (creel survey data - any crappie) | | | | | | | | | | | |
| Angler Hours | 8,783 | 8,067 | no survey | 4,367 | 4,669 | no survey | no survey | 3,109 | no survey | no survey | 5,799 |
| Angler Hours/Acre | 1.9 | 1.8 | no survey | 1.0 | 1.0 | no survey | no survey | 0.6 | no survey | no survey | 1.3 |
| Fishing Success (creel survey data) | | | | | | | | | | | |
| Catch Rate | 0.11 | 0.58 | no survey | 0.57 | 0.46 | no survey | no survey | 0.56 | no survey | no survey | 0.46 |
| Harvest Rate | 0.07 | 0.14 | no survey | 0.34 | 0.30 | no survey | no survey | 0.26 | no survey | no survey | 0.22 |
| Percent Harvested | 53.6% | 22.5% | no survey | 60.1% | 64.2% | no survey | no survey | 75.0% | no survey | no survey | 55.1% |
| Mean Weight (pounds) | 0.86 | 0.91 | no survey | 1.13 | 0.97 | no survey | no survey | 1.44 | no survey | no survey | 1.062 |
| Value of Fishery (creel survey data - trip expenditures) | | | | | | | | | | | |
| Any Crappie | \$13,860 | \$20,710 | no survey | \$7,730 | \$6,850 | no survey | no survey | \$8,990 | no survey | no survey | \$11,628 |

Striped Bass, Boone Reservoir**Striped Bass**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|--------------------------------------------------------------------------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|
| Recruitment (summer shad gill net data - CPUE = # fish/net night) | | | | | | | | | | | |
| Substock CPUE | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Density (summer shad gill net data - CPUE = # fish/net night) | | | | | | | | | | | |
| PSD | 0% | 23% | 27% | 52% | 63% | 60% | 24% | 24% | 50% | 50% | 37% |
| RSD - Preferred | 0% | 0% | 0% | 0% | 3% | 0% | 0% | 0% | 0% | 0% | 0% |
| CPUE | 0.7 | 2.0 | 4.8 | 2.5 | 1.5 | 0.3 | 0.9 | 0.7 | 1.7 | 0.6 | 1.6 |
| CPUE ≥ Stock | 0.7 | 2.0 | 4.7 | 2.4 | 1.5 | 0.3 | 0.9 | 0.7 | 1.7 | 0.6 | 1.5 |
| CPUE ≥ 15" | 0.5 | 3.5 | 3.6 | 2.2 | 1.4 | 0.2 | 0.8 | 0.6 | 1.5 | 0.6 | 1.5 |
| Growth (summer shad gill net data) | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | 399 | 384 | 385 | 367 | 369 | 387 | 365 | N/A | 360 | N/A | 377 |
| Mean TL at Age-3 (mm) | N/A | N/A | 664 | 621 | 608 | N/A | 603 | 508 | 544 | 513 | 580 |
| Relative Weight (winter gill net; data 300' nets) | | | | | | | | | | | |
| Stock - Quality | N/A | 98.6 | 103.5 | 111.8 | no survey | 96.5 | none | 107.9 | no survey | no survey | 103.7 |
| Quality - Preferred | N/A | 95.2 | 93.3 | 92.1 | no survey | 91.9 | 99.6 | 106.7 | no survey | no survey | 96.5 |
| Preferred - Memorable | 78 | N/A | 97.3 | 92.5 | no survey | 84.9 | 93.0 | 96.0 | no survey | no survey | 90.3 |
| Memorable - Trophy | N/A | 93.4 | none | none | no survey | none | 64.8 | none | no survey | no survey | 79.1 |
| Trophy | N/A | N/A | none | none | no survey | none | none | none | no survey | no survey | N/A |
| Mortality (summer shad gill net data) | | | | | | | | | | | |
| Total Mortality | * | * | * | * | * | * | * | * | * | * | * |
| Stocking | | | | | | | | | | | |
| # per Acre | 9.9 | 5.9 | 6.2 | 5.7 | 5.6 | 5.2 | 4.9 | 2.2 | 2.7** | 2.8** | 5.7 |
| Angling Pressure (creel survey data - striped bass only) | | | | | | | | | | | |
| Angler Hours | 8,798 | 10,954 | no survey | 16,310 | 12,037 | no survey | no survey | 6,875 | no survey | no survey | 10,995 |
| Angler Hours/Acre | 1.9 | 2.4 | no survey | 3.6 | 2.7 | no survey | no survey | 1.5 | no survey | no survey | 2.4 |
| Fishing Success (creel survey data - striped bass only) | | | | | | | | | | | |
| Catch Rate | 0.03 | 0.05 | no survey | 0.19 | 0.15 | no survey | no survey | 0.39 | no survey | no survey | 0.16 |
| Harvest Rate | 0.01 | 0.00 | no survey | 0.03 | 0.02 | no survey | no survey | 0.01 | no survey | no survey | 0.01 |
| Percent Harvested | 20.3% | 5.6% | no survey | 11.1% | 15.5% | no survey | no survey | 3.7% | no survey | no survey | 11.2% |
| Mean Weight (pounds) | 10.55 | 16.16 | no survey | 11.13 | 6.55 | no survey | no survey | 14.8 | no survey | no survey | 11.8 |
| Value of Fishery (creel survey data - trip expenditures) | | | | | | | | | | | |
| Any Morones | \$13,990 | \$770 | no survey | \$13,980 | \$11,800 | no survey | no survey | \$144,960 | no survey | no survey | \$37,100 |
| Striped Bass Only | \$15,080 | \$42,810 | no survey | \$130,950 | \$59,550 | no survey | no survey | \$48,320 | no survey | no survey | \$59,342 |

*Data did not meet criteria for calculating mortality

**Stocking numbers reduced due to low water levels

Hybrid Striped Bass, Boone Reservoir**Hybrid Striped Bass**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|--------------------------------------------------------------------------|----------|---------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|
| Recruitment (summer shad gill net data - CPUE = # fish/net night) | | | | | | | | | | | |
| Substock CPUE | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.00 | 0.0 | 0.00 | 0.0 | 0.01 |
| Density (summer shad gill net data - CPUE = # fish/net night) | | | | | | | | | | | |
| PSD | 100% | 100% | 97% | 100% | 100% | 100% | 98% | 98% | 100% | 100% | 99% |
| RSD - Preferred | 78% | 85% | 71% | 87% | 88% | 91% | 95% | 95% | 100% | 93% | 88% |
| CPUE | 1.4 | 4.1 | 3.9 | 3.9 | 2.3 | 2.3 | 2.1 | 0.8 | 0.8 | 1.5 | 2.3 |
| CPUE ≥ Stock | 1.4 | 4.1 | 3.9 | 3.9 | 2.2 | 2.3 | 2.1 | 0.8 | 0.8 | 1.5 | 2.3 |
| CPUE ≥ MSL (15") | 1.1 | 3.5 | 2.7 | 3.1 | 1.8 | 2.0 | 1.8 | 0.6 | 0.6 | 1.3 | 1.8 |
| Growth (summer shad gill net data) | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | 370 | 407 | 353 | 385 | 366 | 356 | 352 | N/A | 389 | 382 | 373 |
| Mean TL at Age-3 (mm) | 560 | 576 | 554 | 549 | 504 | 538 | 530 | 505 | 531 | 526 | 537 |
| Relative Weight (winter gill net data) | | | | | | | | | | | |
| Stock - Quality | 168.3 | none | none | none | no survey | none | none | none | no survey | no survey | 168.3 |
| Quality - Preferred | none | none | none | none | no survey | none | none | 92.2 | no survey | no survey | 92.2 |
| Preferred - Memorable | 98.9 | 95.2 | 90.8 | 93.6 | no survey | 88.0 | 105.5 | 95.7 | no survey | no survey | 95.4 |
| Memorable - Trophy | 91.1 | 98.2 | 91.7 | 90.8 | no survey | 88.3 | 100.4 | 95.0 | no survey | no survey | 93.7 |
| Trophy | none | none | none | none | no survey | none | none | none | no survey | no survey | N/A |
| Mortality (summer shad gill net data) | | | | | | | | | | | |
| Total Mortality | * | * | * | * | * | * | * | 35% | * | * | * |
| Stocking | | | | | | | | | | | |
| # per Acre | 3.2 | 5.1 | 6.9 | 4.9 | 7.2 | 7.7 | 5.6 | 7.1 | 2.9** | 2.9** | 6.0 |
| Angling Pressure (creel survey data - hybrid striped bass only) | | | | | | | | | | | |
| Angler Hours | 260 | 2,300 | no survey | 4,236 | 1,576 | no survey | no survey | 447 | no survey | no survey | 1,764 |
| Angler Hours/Acre | 0.1 | 0.5 | no survey | 0.9 | 0.3 | no survey | no survey | 0.1 | no survey | no survey | 0.4 |
| Fishing Success (creel survey data - hybrid striped bass only) | | | | | | | | | | | |
| Catch Rate | 0.02 | 0.02 | no survey | 0.21 | 0.09 | no survey | no survey | 0.38 | no survey | no survey | 0.14 |
| Harvest Rate | 0.02 | 0.00 | no survey | 0.03 | 0.00 | no survey | no survey | 0.04 | no survey | no survey | 0.02 |
| Percent Harvested | 31.1% | 17.3% | no survey | 14.0% | 9.6% | no survey | no survey | 24.5% | no survey | no survey | 19.3% |
| Mean Weight (pounds) | 3.03 | 4.64 | no survey | 6.19 | 4.12 | no survey | no survey | 6.6 | no survey | no survey | 4.9 |
| Value of Fishery (creel survey data - trip expenditures) | | | | | | | | | | | |
| Any Morones | \$13,990 | \$770 | no survey | \$13,980 | \$11,800 | no survey | no survey | \$144,960 | no survey | no survey | \$37,100 |
| Hybrid Striped Bass Only | \$550 | \$6,240 | no survey | \$17,320 | \$4,110 | no survey | no survey | \$0 | no survey | no survey | \$5,644 |

* Data did not meet criteria for calculating mortality.

**Stocking numbers reduced due to low water levels

Sunfish, Boone Reservoir

| Sunfish | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|----------------------------------------------------------------------|---------|---------|-----------|----------|---------|-----------|-----------|---------|-----------|-----------|---------|
| Angling Pressure (creel survey data - any sunfish) | | | | | | | | | | | |
| Angler Hours | 1,955 | 6,985 | no survey | 6,968 | 5,757 | no survey | no survey | 4,801 | no survey | no survey | 5,293 |
| Angler Hours/Acre | 0.4 | 1.5 | no survey | 1.5 | 1.3 | no survey | no survey | 1.1 | no survey | no survey | 1.2 |
| Fishing Success (creel survey data - bluegill only) | | | | | | | | | | | |
| Catch Rate (bluegill) | 2.16 | 3.01 | no survey | 3.53 | 2.65 | no survey | no survey | 2.15 | no survey | no survey | 2.70 |
| Harvest Rate (bluegill) | 0.55 | 0.42 | no survey | 0.63 | 0.26 | no survey | no survey | 0.17 | no survey | no survey | 0.41 |
| % Harvested (bluegill) | 58.6% | 4.6% | no survey | 10.3% | 6.4% | no survey | no survey | 6.1% | no survey | no survey | 17.2% |
| Mean Weight (bluegill) | 0.22 | 0.26 | no survey | 0.31 | 0.35 | no survey | no survey | 0.22 | no survey | no survey | 0.272 |
| Value of Fishery (creel survey data - trip expenditures only) | | | | | | | | | | | |
| Any Sunfish | \$1,960 | \$7,880 | no survey | \$10,170 | \$5,490 | no survey | no survey | \$5,400 | no survey | no survey | \$6,180 |

Catfish, Boone Reservoir

| Catfish | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|----------------------------------------------------------------------|---------|---------|-----------|---------|---------|-----------|-----------|-------|-----------|-----------|---------|
| Angling Pressure (creel survey data - all catfish) | | | | | | | | | | | |
| Angler Hours | 1,978 | 2,421 | no survey | 1,184 | 2,967 | no survey | no survey | 213 | no survey | no survey | 1,753 |
| Angler Hours/Acre | 0.4 | 0.5 | no survey | 0.3 | 0.7 | no survey | no survey | 0.0 | no survey | no survey | 0.4 |
| Fishing Success (creel survey data) | | | | | | | | | | | |
| Catch Rate (channel cat) | 0.21 | 0.15 | no survey | 0.35 | 0.27 | no survey | no survey | 0 | no survey | no survey | 0.20 |
| Harvest Rate (channel cat) | 0.20 | 0.11 | no survey | 0.14 | 0.17 | no survey | no survey | 0 | no survey | no survey | 0.12 |
| % Harvested (channel cat) | 77.9% | 20.1% | no survey | 31.3% | 20.4% | no survey | no survey | 46.5% | no survey | no survey | 39.2% |
| Mean Weight (channel cat) | 2.93 | 4.95 | no survey | 2.29 | 3.69 | no survey | no survey | 3.83 | no survey | no survey | 3.54 |
| Value of Fishery (creel survey data - trip expenditures only) | | | | | | | | | | | |
| Any Catfish | \$4,270 | \$5,980 | no survey | \$1,390 | \$3,840 | no survey | no survey | \$280 | no survey | no survey | \$3,152 |

Shad, Boone Reservoir

| Shad | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|---------------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Density (summer shad gill net data - geometric mean density) | | | | | | | | | | | |
| Gizzard Shad | 23.9 | 8.9 | 9.0 | 5.8 | 11.6 | 6.3 | 6.9 | 8.0 | 15.5 | 9.8 | 10.6 |
| Threadfin Shad | 40.2 | 5.0 | 1.3 | 1.5 | 0.1 | 2.1 | 3.2 | 1.4 | 0.0 | 0.5 | 5.5 |
| Alewife | 3.3 | 7.3 | 3.2 | 9.4 | 28.2 | 5.5 | 7.1 | 2.9 | 15.2 | 6.0 | 8.8 |

Habitat Enhancement, Boone Reservoir

| Type of Work | Details | Quantity | |
|------------------------|---------------|------------|-----------|
| | | New | Renovated |
| Planted | Hydro-seeding | 76.3 Acres | |
| Rebrushed | | | |
| Checked and Refurbishe | stake beds | | |
| Rebrushed | | | |
| Added | | | |
| Installed | | | |

Water Quality Monitoring, Boone Reservoir

| Parameter | Sampling Period | Water Quality |
|------------------|-----------------|---------------|
| Temperature | July to August | normal |
| Dissolved Oxyged | July to August | normal |
| | | |

Cherokee Reservoir - 2016

Description

Area: 30,300 acres

Shoreline: 393 miles

Counties: Jefferson, Grainger, Hamblen, and Hawkins

Full Pool Elevation (feet-msl): ~1070

Winter Pool Elevation (feet-msl): ~1040

Dam Completion: 1941

Lake-wide Angling Summary

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|-----------|------|------|------|------|-------------|------|-------------|-------------|
| Angling Pressure | | | | | | | | | | |
| Angler Hours | - | 407,673 | - | - | - | - | 567,593 | - | 286,212 | 339,391 |
| Angler Hours Per Acre | - | 13.5 | - | - | - | - | 18.7 | - | 9.4 | 11.2 |
| Angler Trips | - | 78,461 | - | - | - | - | 88,384 | - | 49,167 | 59,726 |
| Value of Fishery (angler expenditures creel) | | | | | | | | | | |
| All Species | - | \$972,470 | - | - | - | - | \$2,846,760 | - | \$1,530,150 | \$1,848,370 |

Black Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|------|-----------|------|------|------|------|-------------|------|-----------|-----------|
| Angling Pressure | | | | | | | | | | |
| All Black Bass (hrs) | - | 189,452 | - | - | - | - | 358,306 | - | 136,315 | 142,006 |
| (hrs/acre) | - | 6.25 | - | - | - | - | 11.83 | - | 4.50 | 4.69 |
| Any Black Bass (hrs) | - | 702 | - | - | - | - | 19,757 | - | 71,785 | 47,006 |
| (hrs/acre) | - | 0.02 | - | - | - | - | 0.65 | - | 2.37 | 1.55 |
| Largemouth Bass (hrs) | - | 188,140 | - | - | - | - | 332,053 | - | 52,988 | 92,890 |
| (hrs/acre) | - | 6.21 | - | - | - | - | 10.96 | - | 1.75 | 3.07 |
| Smallmouth Bass (hrs) | - | 610 | - | - | - | - | 6,151 | - | 9,897 | 2,110 |
| (hrs/acre) | - | 0.02 | - | - | - | - | 0.20 | - | 0.33 | 0.07 |
| Spotted Bass (hrs) | - | 0 | - | - | - | - | 345 | - | 1,645 | 0 |
| (hrs/acre) | - | 0.00 | - | - | - | - | 0.01 | - | 0.05 | 0.00 |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| All Black Bass | - | \$709,440 | - | - | - | - | \$1,974,960 | - | \$763,610 | \$757,400 |
| Any Black Bass | - | \$0 | - | - | - | - | \$55,890 | - | \$380,130 | \$238,650 |
| Largemouth Bass | - | \$707,520 | - | - | - | - | \$1,898,930 | - | \$190,030 | \$422,000 |
| Smallmouth Bass | - | \$1,920 | - | - | - | - | \$18,570 | - | \$189,920 | \$96,750 |
| Spotted Bass | - | \$0 | - | - | - | - | \$1,570 | - | \$3,530 | \$0 |

Largemouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|------|-------|------|------|------|------|-------|------|-------|-------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 8.00 | 6.67 | 3.47 | 3.73 | - | - | 5.60 | 3.73 | - | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | 79 | 68 | 86 | 78 | - | - | 82.0 | 85 | - | - |
| RSD (preferred) | 55 | 33 | 44 | 36 | - | - | 41.0 | 53 | - | - |
| CPUE (total) | 53.6 | 60.8 | 58.7 | 79.2 | - | - | 47.5 | 62.1 | - | - |
| CPUE ≥ Stock | 45.6 | 54.1 | 55.2 | 75.5 | - | - | 36.3 | 58.4 | - | - |
| CPUE ≥ MLL (15-inches) | 25.1 | 17.6 | 24.5 | 26.9 | - | - | 17.1 | 29.6 | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 88.9 | 89.1 | 87.6 | 82.0 | - | - | 86.2 | 76.8 | - | - |
| Quality | 93.6 | 93.6 | 93.3 | 85.3 | - | - | 88.2 | 82.2 | - | - |
| Preferred | 93.9 | 93.5 | 94.9 | 84.5 | - | - | 89.3 | 84.1 | - | - |
| Memorable | 94.3 | 91.7 | 84.1 | 92.3 | - | - | 89.8 | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | 0.62 | - | - | - | - | 0.72 | - | 0.50 | 0.60 |
| Harvest Rate (intended) | - | 0.01 | - | - | - | - | 0.15 | - | 0.02 | 0.01 |
| % Released | - | 98.3% | - | - | - | - | 76.7% | - | 96.2% | 98.3% |
| Mean Weight | - | 2.34 | - | - | - | - | 2.96 | - | 1.09 | 2.62 |

Smallmouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|------|-------|------|------|------|------|-------|------|--------|-------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 0.53 | 0.00 | 0.00 | 0.00 | - | - | 0.0 | 0.53 | target | - |
| | | | | | | | | | | |
| Density (electrofishing) | | | | | | | | | | |
| PSD | 71 | 100 | 100 | 91 | - | - | 95.0 | 84 | - | - |
| RSD (preferred) | 71 | 100 | 100 | 73 | - | - | 73.0 | 64 | - | - |
| CPUE (preferred) | 0.3 | 0.8 | 0.8 | 6.4 | - | - | 5.3 | 5.3 | - | - |
| CPUE (memorable) | 0.8 | 0.8 | 0.5 | 2.1 | - | - | 1.9 | 2.1 | - | - |
| CPUE (trophy) | 0.3 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | - | - |
| CPUE (total) | 2.4 | 1.6 | 1.3 | 8.8 | - | - | 9.9 | 12.3 | - | - |
| CPUE ≥ Stock | 1.9 | 1.6 | 1.3 | 8.8 | - | - | 9.9 | 11.7 | - | - |
| CPUE ≥ Preferred | 1.4 | 1.6 | 1.3 | 8.5 | - | - | 7.2 | 7.4 | - | - |
| CPUE ≥ MLL (18-inches) | 1.1 | 0.8 | 0.3 | 0.5 | - | - | 0.5 | 0.1 | - | - |
| | | | | | | | | | | |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | 4.2 | - |
| Length Age-3 | - | - | - | - | - | - | - | - | 13.0 | - |
| | | | | | | | | | | |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 81.0 | - | - | 78.6 | - | - | 85.2 | 78.3 | 78.0 | - |
| Quality | - | - | - | 83.8 | - | - | 81.4 | 81.6 | 78.5 | - |
| Preferred | 87.1 | 90.4 | 89.0 | 82.5 | - | - | 82.2 | 78.4 | 77.9 | - |
| Memorable | 84.8 | 86.3 | 91.6 | 79.5 | - | - | 80.7 | 74.2 | 79.8 | - |
| | | | | | | | | | | |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | 46.0% | - |
| | | | | | | | | | | |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | 0.29 | - | - | - | - | 0.72 | - | 0.91 | 0.24 |
| Harvest Rate (intended) | - | 0.00 | - | - | - | - | 0.15 | - | 0.05 | 0.00 |
| % Released | - | 98.8% | - | - | - | - | 76.7% | - | 93.4% | 99.0% |
| Mean Weight | - | 1.74 | - | - | - | - | 2.96 | - | 3.08 | 2.88 |

Spotted Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-------|-------|-------|------|------|------|-------|------|-------|------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 0.00 | 0.80 | 0.27 | 0.00 | - | - | 1.33 | 0.27 | - | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | 30 | 56 | 77 | 71 | - | - | 66 | 59 | - | - |
| RSD (preferred) | 4 | 9 | 19 | 29 | - | - | 0 | 18 | - | - |
| CPUE (total) | 7.2 | 9.3 | 8.5 | 9.3 | - | - | 9.1 | 4.8 | - | - |
| CPUE \geq Stock | 7.2 | 8.5 | 8.3 | 9.3 | - | - | 7.8 | 4.5 | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 100.7 | 99.4 | 104.0 | 89.5 | - | - | 98.9 | 85.2 | - | - |
| Quality | 106.7 | 99.5 | 105.4 | 93.8 | - | - | 95.5 | 89.4 | - | - |
| Preferred | 110.2 | 100.7 | 102.8 | 92.1 | - | - | - | 88.9 | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | - | - | - | - | - | 0.40 | - | 0.29 | - |
| Harvest Rate (intended) | - | - | - | - | - | - | 0.00 | - | 0.14 | - |
| % Released | - | 92.0% | - | - | - | - | 77.6% | - | 97.3% | - |
| Mean Weight | - | 1.18 | - | - | - | - | 2.30 | - | - | - |

Black Crappie

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|--------|----------|---------|---------|-------|------|-----------|---------|----------|-----------|
| Recruitment (trap netting) | | | | | | | | | | |
| Substock CPUE | 0.50 | 0.10 | 0.09 | - | 0.41 | 0.31 | 0.07 | 0.58 | - | 0.07 |
| Density (trap netting) | | | | | | | | | | |
| PSD | 83 | 85 | 89 | - | 69 | 96 | 95 | 77 | - | 85 |
| RSD (preferred) | 42 | 44 | 62 | - | 13 | 67 | 75 | 57 | - | 57 |
| CPUE (total) | 6.5 | 1.9 | 2.1 | - | 7.1 | 5.6 | 2.9 | 2.8 | - | 2.5 |
| CPUE ≥ Stock | 6.0 | 1.8 | 2.0 | - | 6.7 | 5.3 | 2.8 | 2.2 | - | 2.4 |
| CPUE ≥ MLL (10-inches) | 2.5 | 0.8 | 1.2 | - | 0.8 | 3.3 | 2.0 | 1.2 | - | 1.3 |
| Growth (trap netting) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | | | | | - | - |
| Length Age-3 | - | - | - | - | | | | | - | - |
| Condition (trap netting) | | | | | | | | | | |
| Stock | 97.8 | 102.5 | 94.2 | - | 100.1 | 91.3 | 97.7 | 75.1 | - | - |
| Quality | 98.5 | 99.0 | 103.3 | - | 101.1 | 94.2 | 90.5 | 92.9 | - | - |
| Preferred | 96.7 | 92.8 | 93.9 | - | 96.9 | 97.7 | 92.4 | 88.9 | - | - |
| Memorable | 97.6 | 94.3 | 92.0 | - | 95.2 | 95.8 | 93.7 | 87.9 | - | - |
| Mortality (trap netting) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | 72,775 | 62,582 | 139,068 | 103,099 | 0 | 0 | 41,937 | 116,004 | 252,781 | 165,143 |
| #/Acre | 2.4 | 2.1 | 4.6 | 3.4 | 0.0 | 0.0 | 1.4 | 3.8 | 8.3 | 5.5 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | - | 83,486 | - | - | - | - | 41,750 | - | 14,809 | 44,625 |
| Angler Hours/Acre | - | 2.8 | - | - | - | - | 1.4 | - | 0.5 | 1.5 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | - | 1.17 | - | - | - | - | 2.36 | - | 0.76 | 1.67 |
| Harvest Rate (any crappie) | - | 0.52 | - | - | - | - | 0.86 | - | 0.71 | 1.04 |
| % Released (black crappie) | - | 55.5% | - | - | - | - | 66.2% | - | 0.0% | 31.7% |
| Mean Weight (black crappie) | - | 0.77 | - | - | - | - | 0.45 | - | 0.57 | 0.56 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | - | \$35,160 | - | - | - | - | \$158,520 | - | \$39,230 | \$112,980 |

Striped Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|---------|----------|-------|--------|--------|--------|-----------|--------|----------|-----------|
| Density (gill netting) | | | | | | | | | | |
| PSD | - | 69 | 83 | 98 | - | 92 | - | - | - | - |
| RSD (preferred) | - | - | - | - | - | 23 | - | - | - | - |
| CPUE (total) | - | 2.2 | 12.9 | 5.6 | - | 2.2 | - | - | - | - |
| CPUE \geq Stock | - | 2.2 | 12.9 | 5.6 | - | 2.2 | - | - | - | - |
| CPUE \geq 15-inches | - | 2.2 | 12.9 | 5.6 | - | 2.2 | - | - | - | - |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-2 | 17.7 | 17.2 | 18.2 | - | - | - | - | - | 18.2 | - |
| Length Age-3 | 22.0 | 23.2 | 23.2 | - | - | - | - | - | 23.2 | - |
| Condition (gill netting) | | | | | | | | | | |
| Stock | - | 87.5 | 107.2 | 94.0 | - | 113.3 | - | - | 92.2 | - |
| Quality | - | 86.6 | 98.7 | 94.0 | - | 101.3 | - | - | 92.5 | - |
| Preferred | - | - | - | - | - | 95.1 | - | - | - | - |
| Memorable | - | - | - | - | - | - | - | - | - | - |
| Mortality (gill netting) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | 151,818 | 0 | 0 | 72,039 | 72,997 | 61,472 | 92,180 | 25,399 | 71,748 | 39,906 |
| #/Acre | 5.0 | 0.0 | 0.0 | 2.4 | 2.4 | 2.0 | 3.0 | 0.8 | 2.4 | 1.3 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | - | 23,301 | - | - | - | - | 87,431 | - | 18,162 | 43,499 |
| Angler Hours/Acre | - | 0.8 | - | - | - | - | 2.9 | - | 0.6 | 1.4 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | 0.11 | - | - | - | - | 0.33 | - | 0.28 | 0.18 |
| Harvest Rate (intended) | - | 0.05 | - | - | - | - | 0.15 | - | 0.02 | 0.05 |
| % Released | - | 76.0% | - | - | - | - | 52.8% | - | 75.8% | 77.1% |
| Mean Weight | - | 8.51 | - | - | - | - | 7.19 | - | 4.79 | 4.53 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Striped Bass | - | \$73,040 | - | - | - | - | \$408,570 | - | \$78,290 | \$377,190 |

Hybrid Striped Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|--------|-----------|--------|--------|--------|--------|--------|--------|-----------|-----------|
| Density (gill netting) | | | | | | | | | | |
| PSD | - | 100 | 100 | 100 | - | 100 | - | - | - | - |
| RSD (preferred) | - | 99 | 100 | 100 | - | 99 | - | - | - | - |
| CPUE (total) | - | 15.7 | 17.0 | 11.3 | - | 81.8 | - | - | - | - |
| CPUE \geq Stock | - | 15.7 | 17.0 | 11.3 | - | 81.8 | - | - | - | - |
| CPUE \geq 15-inches | - | 15.7 | 17.0 | 11.3 | - | 81.0 | - | - | - | - |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-2 | 18.8 | 18.0 | 17.2 | - | - | - | - | - | 17.2 | - |
| Length Age-3 | 20.0 | 20.7 | 20.7 | - | - | - | - | - | 20.7 | - |
| Condition (gill netting) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | - | - | 105.7 | - | - | 98.0 | - |
| Preferred | - | 101.8 | 102.5 | 100.2 | - | 104.6 | - | - | 98.3 | - |
| Memorable | - | 99.1 | 100.8 | 97.9 | - | 106.4 | - | - | 95.7 | - |
| Mortality (gill netting) | | | | | | | | | | |
| Total Mortality | - | 32.0% | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | 55,006 | 85,382 | 85,741 | 82,906 | 44,160 | 43,700 | 22,512 | 53,997 | 74,501 | 58,857 |
| #/Acre | 1.8 | 2.8 | 2.8 | 2.7 | 1.5 | 1.4 | 0.7 | 1.8 | 2.5 | 1.9 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | - | 44,202 | - | - | - | - | - | - | 33,309 | 36,589 |
| Angler Hours/Acre | - | 1.5 | - | - | - | - | - | - | 1.1 | 1.2 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | 0.61 | - | - | - | - | - | - | 0.29 | 0.34 |
| Harvest Rate (intended) | - | 0.21 | - | - | - | - | - | - | 0.07 | 0.21 |
| % Released | - | 70.4% | - | - | - | - | - | - | 56.4 | 53.6% |
| Mean Weight | - | 6.63 | - | - | - | - | - | - | 6.11 | 5.17 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Hybrid Striped Bass | - | \$114,290 | - | - | - | - | - | - | \$195,800 | \$296,070 |

Walleye

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|---------|---------|--------|---------|--------|--------|---------|---------|----------|----------|
| Stocking | | | | | | | | | | |
| # | 146,959 | 168,535 | 79,420 | 158,512 | 92,220 | 46,375 | 42,504 | 109,940 | 80,150 | 0 |
| #/Acre | 4.9 | 5.6 | 2.6 | 5.2 | 3.0 | 1.5 | 1.4 | 3.6 | 2.6 | 0.0 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | - | 3,390 | - | - | - | - | 931 | - | 17,796 | 10,380 |
| Angler Hours/Acre | - | 0.1 | - | - | - | - | 0.0 | - | 0.6 | 0.3 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | 0.27 | - | - | - | - | 0.00 | - | 0.32 | 0.77 |
| Harvest Rate (intended) | - | 0.07 | - | - | - | - | 0.00 | - | 0.17 | 0.32 |
| % Released | - | 89.1% | - | - | - | - | 0.0% | - | 46.5% | 70.3% |
| Mean Weight | - | 2.41 | - | - | - | - | 1.66 | - | 2.15 | 2.07 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Walleye | - | \$0 | - | - | - | - | \$1,870 | - | \$68,370 | \$43,980 |

Saugeye

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|------|------|------|------|-------|---------|---------|------|----------|
| Stocking | | | | | | | | | | |
| # | 0 | 0 | 0 | 0 | 0 | 1,600 | 104,322 | 195,020 | 0 | 69,483 |
| #/Acre | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 3.4 | 6.4 | 0.0 | 2.3 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | - | - | - | - | - | - | - | - | - | 4,868 |
| Angler Hours/Acre | - | - | - | - | - | - | - | - | - | 0.2 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | - | - | - | - | - | - | - | - | 0.66 |
| Harvest Rate (intended) | - | - | - | - | - | - | - | - | - | 0.52 |
| % Released | - | - | - | - | - | - | - | - | - | 16.2% |
| Mean Weight | - | - | - | - | - | - | - | - | - | 2.95 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Saugeye | - | - | - | - | - | - | - | - | - | \$25,040 |

Sunfish

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|---------|------|------|------|------|----------|------|---------|-------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all sunfish) | - | 4,361 | - | - | - | - | 17,537 | - | 3,442 | 0 |
| Angler Hours/Acre | - | 0.1 | - | - | - | - | 0.6 | - | 0.1 | 0.0 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any sunfish) | - | 1.86 | - | - | - | - | 1.45 | - | 3.46 | 0.00 |
| Harvest Rate (any sunfish) | - | 0.75 | - | - | - | - | 0.54 | - | 2.85 | 0.00 |
| % Released (bluegill) | - | 52.9% | - | - | - | - | 64.9% | - | 60.5% | 94.4% |
| Mean Weight (bluegill) | - | 0.26 | - | - | - | - | 0.18 | - | 0.17 | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Sunfish | - | \$3,170 | - | - | - | - | \$40,870 | - | \$3,530 | \$0 |

Catfish

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|----------|------|------|------|------|----------|------|----------|----------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all catfish) | - | 39,978 | - | - | - | - | 14,782 | - | 10,909 | 9,998 |
| Angler Hours/Acre | - | 1.3 | - | - | - | - | 0.5 | - | 0.4 | 0.3 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any catfish) | - | 0.64 | - | - | - | - | 0.54 | - | 0.52 | 0.89 |
| Harvest Rate (any catfish) | - | 0.41 | - | - | - | - | 0.33 | - | 0.41 | 0.80 |
| % Released (channel) | - | 44.1% | - | - | - | - | 45.8% | - | 14.9% | 33.8% |
| Mean Weight (channel) | - | 1.57 | - | - | - | - | 1.37 | - | 3.01 | 1.82 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Catfish | - | \$24,060 | - | - | - | - | \$75,770 | - | \$40,850 | \$50,780 |

Shad

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Density (Summer Shad Gill Netting) (geometric means) | | | | | | | | | | |
| Alewife CPUE | 0.4 | 0.4 | 1.5 | 2.8 | - | - | - | 1.0 | - | - |
| Gizzard CPUE | 3.3 | 1.7 | 4.1 | 5.5 | - | - | - | 2.5 | - | - |
| Threadfin CPUE | 2.0 | 4.7 | 2.3 | 3.1 | - | - | - | 1.4 | - | - |

Habitat Enhancement

| Type of Work | Details | Quantity | |
|-----------------|---------|-----------|-----------|
| | | New | Renovated |
| Christmas trees | | 100 units | |
| Reef Balls | | 31 units | |

Water Quality Monitoring

| Parameter | Sampling Period | Water Quality |
|------------------|-----------------|---------------|
| Temperature | July - August | Normal |
| Dissolved Oxygen | July - August | Normal |
| PH | July - August | Normal |
| Conductivity | July - August | Normal |

Douglas Reservoir

Description

| | |
|-----------------------------------------------------------|---------------------------------------------------|
| Surface Area: 30,400 acres | Shoreline Distance: 127 miles |
| Counties: Jefferson, Sevier, Cocke | Drainage Area: 4541 square miles |
| Full Pool Elevation: 994 feet above mean sea level | Mean Annual Fluctuation: 50 feet |
| Maximum Depth: 129 feet | Thermocline Depth: 23 feet |
| Mean Chlorophyll (Forebay): 6.8 parts per million | Shoreline Development: 17% |
| Trophic Status (Forebay): Mesotrophic | Trophic Index, Carlson (1977): 49.3 |
| Hydraulic Retention Time: 105 days | Reservoir Age: 72 years (dam closure 1943) |
| Total Fishing Effort: No Creel in 2016 | Total Value by Anglers: No Creel in 2016 |

Summary:

Electrofishing

The 2016 smallmouth bass catch rates were a little below average, with a CPUE of 28.8 fish/hour. We saw another strong year class in 2016, in which over half of the fish collected (60%) were 7-inches and under. Large number of smallmouth bass sampled under 7-inches, the last few years, should help smallmouth populations remain stable and fishing should continue to improve. The relative weights for smallmouth bass were normal for Douglas Reservoir.

The 2016 largemouth bass catch rates were below average, with a CPUE of 83.0 fish/hour. This year we saw a large percentage of fish between 10 to 14-inches (45%). It looks like these fish recruited from the smaller size class we saw last year. The large number of smaller fish in the largemouth bass population will help to ensure a stable and quality fishery for the next several years. The relative weights for largemouth were also normal for Douglas Reservoir.

Trap Netting

Trap nets were used to sample Douglas Reservoir crappie populations in late November and early December 2016. These nets were set from just above Nina Creek to Flat Creek. The TWRA collected a total of 281 black crappie, 87 white crappie, and 1 black-nose black crappie in 105 trap net sets.

About 68% of the black crappie collected were between 6 and 10 inches, which indicated that there was natural reproduction in 2015. About 10% of the black crappie collected were less than 5 inches, which indicated that there was natural reproduction of black crappie in 2016. About 74% of the white crappie collected were less than 5-inches, which indicated good natural reproduction of that species as well.

This is extremely good news, indicating successful crappie reproduction on Douglas Reservoir, the last five years. Even though the overall numbers of crappie were lower than normal, we are still optimistic because of several consecutive years of natural reproduction. This still indicates that the Douglas crappie population continues to show good signs of recovery.

Gill Netting

Gill nets were used to sample for sauger, walleye and white bass in December 2016. We collected 11 sauger, 53 walleye, and 43 white bass in six experimental gill nets on Douglas Reservoir. The gill nets were set from Indian Creek to Muddy Creek.

The catch rates for sauger were below average at 1.8 fish per net night. We hope that stocking efforts combined with the current (1 fish over 16-inches) regulation, which is in place to help protect adult female sauger, will help sauger

populations recover on Douglas Reservoir.

The catch rates for walleye were above average at 8.8 fish per net night. The good news for the walleye population is that there was also a good percentage collected under 12-inches (57%). This would indicate another successful spawning year for Douglas Reservoir walleye. The number of walleye collected over the 15-inch size limit would indicate that there will be plenty of keeper size fish for anglers in 2017.

The overall number of white bass collected was about average for Douglas Reservoir. This is good news and should mean that there will be plenty of white bass for anglers to catch in 2016.

Shad Netting

There was no shad netting conducted on Douglas Reservoir in 2016.

Habitat Enhancement

There was not any habitat work conducted on Douglas Reservoir in 2016

Water Quality

Water quality sampling was conducted at two sites on Douglas Reservoir during the months of July, August, and September. These samples were normal for Douglas Reservoir.

Lakewide Angling Summary

| Total Effort and Expenditures | | | | | | | | | | |
|----------------------------------------------|-------------|-----------|-----------|-----------|-----------|-------------|-----------|-------------|-----------|-----------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| Angling Pressure | | | | | | | | | | |
| Angler Hours | 567,005 | no survey | no survey | no survey | no survey | 706,357 | no survey | 581,862 | 276,669 | no survey |
| Angler Hours Per Acre | 18.5 | no survey | no survey | no survey | no survey | 23.0 | no survey | 19.1 | 9.1 | no survey |
| Angler Trips | 109,325 | no survey | no survey | no survey | no survey | 126,943 | no survey | 98,479 | 49,233 | no survey |
| Value of Fishery (angler expenditures creel) | | | | | | | | | | |
| All Species | \$1,348,060 | no survey | no survey | no survey | no survey | \$3,961,800 | no survey | \$2,332,710 | \$928,230 | no survey |

Black Bass, Douglas Reservoir

| Black Bass | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|-----------------------------------------------------------------|---------------------|----------------|-------------|-------------|-------------|-------------|---------------|-------------|--------------|---------------|-------------|----------------|
| Angling Pressure (creel survey data) | | | | | | | | | | | | |
| All Black Bass | (hrs) (hrs/acre) | 204,725 6.7 | N o | N o | N o | N o | 379,812 12 | N o | 179,745 6 | 72,219 2.4 | N o | 139,417 6.9 |
| Any Black Bass | (hrs) (hrs/acre) | 116,281 3.8 | | | | | 460 0 | | 51,624 2 | 34,939 1.1 | | 50,826 1.7 |
| Largemouth Bass | (hrs) (hrs/acre) | 88,444 2.9 | S u r | S u r | S u r | S u r | 378,500 12 | S u r | 128,121 4 | 36,758 1.2 | S u r | 157,956 5.2 |
| Smallmouth Bass | (hrs) (hrs/acre) | 0 0.0 | v e | v e | v e | v e | 8,522 0 | v e | 0 0 | 522 0.0 | v e | 2,261 0.1 |
| Spotted Bass | (hrs) (hrs/acre) | 0 0.0 | y | y | y | y | 0 0 | y | 0 0 | 0 0.0 | y | 0 0.0 |
| Tournaments (BITE program) | | | | | | | | | | | | |
| # Tournaments (BITE) | | 4 | 3 | 3 | No Survey | No Survey | No Survey | No Survey | No Survey | No Survey | No Survey | 3 |
| Pounds/Angler Day (BITE) | | 4.29 | 3.73 | 3.49 | No Survey | No Survey | No Survey | No Survey | No Survey | No Survey | No Survey | 3.84 |
| Bass/Angler Day (BITE) | | 2.28 | 2.17 | 1.84 | No Survey | No Survey | No Survey | No Survey | No Survey | No Survey | No Survey | 2.10 |
| Value of Fishery (creel survey data - trip expenditures) | | | | | | | | | | | | |
| All Black Bass | | \$1,013,420 | | | | | \$2,688,140 | | \$975,610 | \$351,230 | | \$1,013,420 |
| Any Black Bass | | \$610,600 | No | No | No | No | \$670 | No | \$249,780 | \$193,930 | No | \$610,600 |
| Largemouth Bass | | \$402,820 | Survey | Survey | Survey | Survey | \$2,627,110 | Survey | \$725,830 | \$157,100 | Survey | \$402,820 |
| Smallmouth Bass | | \$0 | | | | | \$60,360 | | \$0 | \$200 | | \$0 |
| Spotted Bass | | \$0 | | | | | \$0 | | \$0 | \$0 | | \$0 |

Largemouth Bass, Douglas Reservoir

| Largemouth Bass | | | | | | | | | | | |
|--------------------------------------------------------|-------------------------------------|--------|--------|--------|--------|-------|-----------|-------|------|--------|-------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
| Recruitment (electrofishing data - CPUE = # fish/hour) | | | | | | | | | | | |
| Age-1 CPUE | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A | N/A | N/A |
| Substock CPUE | 42.6 | 45.7 | 64.9 | 84.0 | 37.1 | 32.6 | no survey | 33.1 | 18.9 | 13.0 | 41.3 |
| Density (electrofishing data - CPUE = # fish/hour) | | | | | | | | | | | |
| PSD | 44% | 68% | 53% | 52% | 69% | 58% | no survey | 56% | 63% | 75% | 60% |
| RSD - Preferred | 10% | 13% | 12% | 16% | 18% | 26% | no survey | 23% | 28% | 20% | 18% |
| CPUE | 132.3 | 153.7 | 185.7 | 244.9 | 198.6 | 134.6 | no survey | 126.6 | 83.4 | 83.0 | 149.2 |
| CPUE ≥ Stock | 89.7 | 108.0 | 120.9 | 160.9 | 161.4 | 102.0 | no survey | 93.4 | 64.6 | 70.0 | 107.9 |
| CPUE ≥ MSL | N o M i n i m u m S i z e L i m i t | | | | | | | | | | |
| Growth (electrofishing data) | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Mean TL at Age-3 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Relative Weight (electrofishing data) | | | | | | | | | | | |
| Stock - Quality | 92.0 | 87.7 | 90.5 | 87.3 | 87.1 | 85.8 | no survey | 81.5 | 83.0 | 84.8 | 86.6 |
| Quality - Preferred | 88.5 | 90.3 | 90.1 | 89.7 | 89.6 | 90.4 | no survey | 88.8 | 91.0 | 90.2 | 89.8 |
| Preferred - Memorable | 93.0 | 91.0 | 91.4 | 90.9 | 88.4 | 96.5 | no survey | 90.1 | 90.0 | 91.0 | 91.4 |
| Memorable - Trophy | 98.8 | 102.4 | 103.2 | 111.0 | 97.1 | none | no survey | 98.5 | 92.0 | 95.7 | 99.8 |
| Trophy | none | none | none | none | none | none | no survey | none | none | none | none |
| Mortality (electrofishing data) | | | | | | | | | | | |
| Total Mortality | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Fishing Success (creel survey data) | | | | | | | | | | | |
| Catch Rate | 1.20 | No | No | No | No | 0.86 | No | 0.58 | 0.38 | No | 0.76 |
| Harvest Rate | 0.04 | | | | | 0.25 | | 0.11 | 0.00 | | 0.10 |
| Percent Harvested | 6.1% | Survey | Survey | Survey | Survey | 28.7% | Survey | 19.5% | 0.0% | Survey | 13.6% |
| Mean Weight (pounds) | 1.45 | | | | | 2.25 | | 2.91 | N/A | | 2.20 |

Smallmouth Bass, Douglas Reservoir**Smallmouth Bass**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|---------------------------------------------------------------|------|--------|--------|--------|--------|-------|--------|------|------|--------|-------|
| Recruitment (electrofishing data - CPUE = # fish/hour) | | | | | | | | | | | |
| Age-1 CPUE | N/A | N/A | N/A | N/A | N/A | N/A | 1.8 | N/A | N/A | N/A | N/A |
| Substock CPUE | 0.0 | 0.0 | 0.0 | 1.4 | 5.1 | 5.2 | 2.1 | 0.6 | 4.7 | 10.8 | 3.0 |
| *Density (electrofishing data - CPUE = # fish/hour) | | | | | | | | | | | |
| PSD | 29% | 46% | 66% | 47% | 31% | 31% | 80% | 59% | 59% | 22% | 47% |
| RSD - Preferred | 9% | 30% | 34% | 19% | 13% | 16% | 55% | 33% | 38% | 12% | 26% |
| CPUE | 19.8 | 44.9 | 18.7 | 66.4 | 41.6 | 51.8 | 37.4 | 29.3 | 26.3 | 28.8 | 36.5 |
| CPUE ≥ Stock | 19.8 | 44.9 | 18.7 | 65.1 | 36.4 | 46.5 | 22.6 | 28.6 | 21.5 | 18.0 | 32.2 |
| CPUE ≥ MSL (15")** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.6 | 0.0 | 0.5 | 1.0 | 0.3 |
| Growth (electrofishing data) | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | 134 | N/A | N/A | N/A | N/A |
| Mean TL at Age-3 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | 332 | N/A | N/A | N/A | N/A |
| Relative Weight (electrofishing data) | | | | | | | | | | | |
| Stock - Quality | 82.8 | 86.9 | 87.6 | 81.4 | 78.1 | 80.6 | 83.8 | 80.3 | 82.3 | 80.0 | 82.4 |
| Quality - Preferred | 80.9 | 86.1 | 83.3 | 84.1 | 76.5 | 79.9 | 85.3 | 80.4 | 80.1 | 75.9 | 81.3 |
| Preferred - Memorable | 79.8 | 87.0 | 88.4 | 82.3 | 69.1 | 84.1 | 87.0 | 82.3 | 85.9 | 77.6 | 82.4 |
| Memorable - Trophy | 71.0 | 87.1 | 88.0 | 82.6 | 75.8 | 78.3 | 88.3 | 80.5 | 88.5 | 88.4 | 82.8 |
| Trophy | none | none | none | none | none | none | none | none | none | none | none |
| Mortality (electrofishing data) | | | | | | | | | | | |
| Total Mortality | N/A | N/A | N/A | N/A | N/A | N/A | 49% | N/A | N/A | N/A | N/A |
| Stocking | | | | | | | | | | | |
| # per Acre | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.1 | 0.3 | 0.3 | 0.2 | 0.0 | 0.1 |
| Fishing Success (creel survey data) | | | | | | | | | | | |
| Catch Rate | 0.05 | No | No | No | No | 0.00 | No | 0.03 | 0.05 | No | 0.03 |
| Harvest Rate | 0.00 | | | | | 0.01 | | 0.00 | 0.00 | | 0.00 |
| Percent Harvested | 0.0% | Survey | Survey | Survey | Survey | 36.0% | Survey | 8.1% | 0.0% | Survey | 11.0% |
| Mean Weight (pounds) | N/A | | | | | 3.16 | | 3.00 | N/A | | 3.08 |

* 2004 - present data was collected from targetted smallmouth bass sample. Previous data was collected from standardized springtime electrofishing samples.

**Smallmouth Bass size limit changed to seasonal regulation in 2015: 1 fish over 18 inches from June 1st - October 15. 5 fish over 15 inches October 16 - May 31. 2007-2015 data is for 20" MSL

White Crappie, Douglas Reservoir**White Crappie**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|-----------------------------------------------------------------|-----------|--------|--------|--------|--------|-----------|--------|-----------|-----------|--------|-----------|
| Recruitment (trap net data) - CPUE = # fish/ net night | | | | | | | | | | | |
| Age-0 CPUE | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Substock CPUE | 0.0 | 0.0 | 0.0 | 0.4 | 1.3 | 0.0 | 0.1 | 10.3 | 3.6 | 0.6 | 1.6 |
| Density (trap net data) - CPUE = # fish/ net night | | | | | | | | | | | |
| PSD | 100% | 100% | 100% | 9% | 35% | 65% | 93% | 89% | 91% | 57% | 74% |
| RSD - Preferred | 40% | 67% | 100% | 0% | 23% | 40% | 80% | 81% | 55% | 57% | 54% |
| CPUE | 0.2 | 0.0 | 0.0 | 0.6 | 1.5 | 0.3 | 0.4 | 10.7 | 4.0 | 0.8 | 1.9 |
| CPUE ≥ Stock | 0.2 | 0.0 | 0.0 | 0.1 | 0.3 | 0.2 | 0.3 | 0.4 | 0.3 | 0.2 | 0.2 |
| CPUE ≥ MSL (10") | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.3 | 0.1 | 0.1 | 0.1 |
| Growth (trap net data) | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Mean TL at Age-3 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Relative Weight (trap net data) | | | | | | | | | | | |
| Stock - Quality | none | none | none | 88.0 | 83.6 | 84.7 | 83.1 | 115.0 | 108.2 | 81.1 | 92.0 |
| Quality - Preferred | 97.4 | 97.8 | none | 100.0 | 99.9 | 100.7 | 104.7 | 105.8 | 100.5 | none | 100.8 |
| Preferred - Memorable | 101.3 | 92.4 | none | none | 103.4 | 97.1 | 100.1 | 95.9 | 91.6 | 90.0 | 96.5 |
| Memorable - Trophy | 112.8 | none | 51.3 | none | 83.1 | none | 97.8 | 91.5 | 91.7 | 88.0 | 88.0 |
| Trophy | none | none | none | none | none | none | none | none | none | none | none |
| Mortality (trap net data) | | | | | | | | | | | |
| Total Mortality | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Stocking | | | | | | | | | | | |
| # per Acre | 0.5 | 1.2 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 |
| Angling Pressure (creel survey data - any crappie) | | | | | | | | | | | |
| Angler Hours | 227,504 | | | | | 152,524 | | 268,444 | 116,903 | | 191,344 |
| Angler Hours/Acre | 7.5 | | | | | 5.0 | | 8.8 | 3.8 | | 6.3 |
| Fishing Success (creel survey data) | | | | | | | | | | | |
| Catch Rate | 1.57 | No | No | No | No | 2.58 | No | 2.36 | 1.08 | No | 1.90 |
| Harvest Rate | 0.67 | | | | | 0.68 | | 1.43 | 0.79 | | 0.89 |
| Percent Harvested | 39.9% | | | | | 30.6% | | 61.8% | 64.8% | | 49.3% |
| Mean Weight (pounds) | 0.64 | Survey | Survey | Survey | Survey | 0.48 | Survey | 0.55 | 0.55 | Survey | 0.56 |
| Value of Fishery (creel survey data - trip expenditures) | | | | | | | | | | | |
| Any Crappie | \$229,760 | | | | | \$407,204 | | \$655,830 | \$285,560 | | \$394,589 |

Black Crappie, Douglas Reservoir**Black Crappie**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------------------|-----------|--------|--------|--------|--------|-----------|--------|-----------|-----------|--------|
| Recruitment (trap net data) - CPUE = # fish/ net night) | | | | | | | | | | |
| Age-0 CPUE | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Substock CPUE | 0.1 | 0.1 | 0.1 | 0.9 | 1.9 | 0.0 | 3.3 | 2.1 | 1.5 | 0.2 |
| Density (trap net data) - CPUE = # fish/ net night) | | | | | | | | | | |
| PSD | 100% | 82% | 86% | 77% | 65% | 91% | 92% | 80% | 84% | 81% |
| RSD - Preferred | 63% | 58% | 31% | 41% | 29% | 32% | 61% | 46% | 60% | 42% |
| CPUE | 2.1 | 1.3 | 3.4 | 3.4 | 7.8 | 3.9 | 7.0 | 5.4 | 5.9 | 2.7 |
| CPUE ≥ Stock | 2.0 | 1.2 | 3.3 | 2.5 | 6.0 | 3.9 | 3.7 | 3.4 | 4.4 | 2.5 |
| CPUE ≥ MSL (10") | 1.1 | 0.6 | 0.7 | 0.9 | 1.4 | 0.8 | 1.8 | 1.2 | 2.0 | 0.9 |
| Growth (trap net data) | | | | | | | | | | |
| Mean TL at Age-1 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Mean TL at Age-3 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Relative Weight (trap net data) | | | | | | | | | | |
| Stock - Quality | none | 105.8 | 110.2 | 87.9 | 81.6 | 93.9 | 101.9 | 90.1 | 81.6 | 90.3 |
| Quality - Preferred | 107.2 | 98.7 | 105.4 | 103.4 | 94.5 | 94.7 | 97.0 | 103.6 | 93.4 | 99.1 |
| Preferred - Memorable | 101.2 | 97.7 | 98.3 | 96.7 | 96.5 | 91.4 | 94.8 | 95.2 | 96.8 | 94.5 |
| Memorable - Trophy | 95.1 | 93.6 | 95.2 | 102.6 | 93.9 | 89.3 | 83.7 | 91.3 | 92.5 | 91.1 |
| Trophy | none | none | none | none | none | none | none | none | none | none |
| Mortality (trap net data) | | | | | | | | | | |
| Total Mortality | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Stocking | | | | | | | | | | |
| # per Acre | 0.0 | 0.0 | 5.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Angling Pressure (creel survey data - any crappie) | | | | | | | | | | |
| Angler Hours | 227,504 | | | | | 152,524 | | 268,444 | 116,903 | |
| Angler Hours/Acre | 7.5 | | | | | 5.0 | | 8.8 | 3.8 | |
| Fishing Success (creel survey data) | | | | | | | | | | |
| Catch Rate | 0.31 | No | No | No | No | 0.18 | No | 0.15 | 0.05 | No |
| Harvest Rate | 0.18 | | | | | 0.07 | | 0.11 | 0.05 | |
| Percent Harvested | 55.7% | | | | | 47.1% | | 76.3% | 86.9% | |
| Mean Weight (pounds) | 0.81 | Survey | Survey | Survey | Survey | 0.49 | Survey | 0.62 | 0.44 | Survey |
| Value of Fishery (creel survey data - trip expenditures) | | | | | | | | | | |
| Any Crappie | \$229,760 | | | | | \$407,204 | | \$655,830 | \$285,560 | |

Sauger, Douglas Reservoir

| Sauger | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|-----------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Recruitment (winter gill net data) | | | | | | | | | | | |
| Substock CPUE | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Density (winter gill net data - CPUE = # fish/net night) | | | | | | | | | | | |
| PSD | 100% | 65% | 85% | 100% | 91% | 91% | 70% | 96% | 100% | 64% | 86% |
| RSD - Preferred | 37% | 36% | 70% | 79% | 27% | 29% | 70% | 74% | 86% | 27% | 54% |
| CPUE | 5.8 | 9.4 | 4.7 | 1.7 | 1.8 | 5.7 | 3.8 | 3.8 | 1.2 | 1.8 | 4.0 |
| CPUE ≥ Stock | 5.8 | 9.4 | 4.7 | 1.7 | 1.8 | 5.7 | 3.8 | 3.8 | 1.2 | 1.8 | 4.0 |
| CPUE ≥ MSL (16")* | N/A | 2.1 | 2.7 | 0.5 | 0.2 | 0.5 | 2.0 | 1.3 | 0.2 | 0.0 | 1.1 |
| Growth (winter gill net data) | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | 360 | 370 | 386 | 392 | n/a | 343 | 406 | 390 | 381 | 373 | 378 |
| Mean TL at Age-3 (mm) | 367 | 448 | 520 | none | n/a | 397 | 397 | 433 | none | none | 427 |
| Relative Weight (winter gill net data) | | | | | | | | | | | |
| Stock - Quality | none | 91.8 | 92.2 | none | 88.3 | 81.9 | 82.6 | 93.5 | none | 95.3 | 89.4 |
| Quality - Preferred | 95.1 | 99.0 | 93.6 | 94.2 | 95.5 | 89.3 | none | 94.0 | 89.6 | 96.7 | 94.1 |
| Preferred - Memorable | 92.8 | 95.5 | 96.4 | 96.5 | 100.9 | 95.4 | 96.9 | 97.5 | 94.3 | 101.7 | 96.8 |
| Memorable - Trophy | none | 96.3 | 100.8 | none | none | none | none | none | none | none | 98.5 |
| Trophy | none | none | none | none | none | none | none | none | none | none | none |
| Mortality (winter gill net data) | | | | | | | | | | | |
| Total Mortality | N/A | N/A | 52.00% | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 52.00% |
| Stocking | | | | | | | | | | | |
| # per Acre | 2.2 | 2.0 | 1.8 | 0.0 | 6.4 | 0.0 | 3.0 | 0.0 | 0.7 | 2.7 | 1.9 |
| Angling Pressure (creel survey data - sauger data only) | | | | | | | | | | | |
| Angler Hours | 15,001 | No | No | No | No | 1,529 | No | 2,375 | 2,500 | No | 5,351 |
| Angler Hours/Acre | 0.49 | | | | | 0.05 | | 0.07 | 0.08 | | 0.18 |
| Fishing Success (creel survey data - sauger data only) | | | | | | | | | | | |
| Percent Harvested | 21.3% | | | | | 62.8% | | 81.0% | 63.4% | | 57.1% |
| Mean Weight (pounds) | 1.27 | | | | | 1.46 | | 1.59 | 1.67 | | 1.50 |
| Value of Fishery (creel survey data - trip expenditures) | | | | | | | | | | | |
| All Sanders | \$33,040 | Survey | Survey | Survey | Survey | \$245,310 | Survey | \$166,090 | \$80,100 | Survey | \$131,135 |
| Sauger Data Only | \$28,030 | | | | | \$21,520 | | \$8,840 | \$6,950 | | \$16,335 |

*MSL changed to 1 over 16-inches in 2008

Walleye, Douglas Reservoir**Walleye**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean | | | | | | |
|----------------------------------------------------------|----------|--------|--------|--------|--------|-----------|--------|-----------|----------|--------|-----------|--|--|--|--|--|--|
| Recruitment (winter gill net data) | | | | | | | | | | | | | | | | | |
| Substock CPUE | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.2 | 0.3 | 0.1 | | | | | | |
| Density (winter gill net data - CPUE = # fish/net night) | | | | | | | | | | | | | | | | | |
| PSD | 86% | 57% | 22% | 35% | 79% | 33% | 52% | 54% | 48% | 35% | 50% | | | | | | |
| RSD - Preferred | 4% | 11% | 0% | 1% | 0% | 5% | 4% | 0% | 6% | 0% | 3% | | | | | | |
| CPUE | 4.7 | 4.0 | 4.6 | 16.2 | 2.5 | 9.5 | 4.2 | 6.5 | 13.5 | 8.8 | 7.4 | | | | | | |
| CPUE ≥ Stock | 4.7 | 4.0 | 4.6 | 16.2 | 2.3 | 9.5 | 4.2 | 6.5 | 13.3 | 8.5 | 7.4 | | | | | | |
| CPUE ≥ MSL (15") | 4.4 | 2.3 | 1.0 | 5.2 | 1.7 | 3.0 | 2.2 | 3.0 | 5.2 | 2.3 | 3.0 | | | | | | |
| Growth (winter gill net data) | | | | | | | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | 402 | N/A | 429 | 414 | 409 | 404 | 403 | 407 | 407 | 390 | 407 | | | | | | |
| Mean TL at Age-3 (mm) | 458 | 450 | none | none | none | 537 | 480 | 427 | 600 | 430 | 483.1429 | | | | | | |
| Relative Weight (winter gill net data) | | | | | | | | | | | | | | | | | |
| Stock - Quality | 87.1 | 91.7 | 88.3 | 88.8 | 89.8 | 86.6 | 85.0 | 94.1 | 87.4 | 88.3 | 88.7 | | | | | | |
| Quality - Preferred | 84.2 | 88.4 | 87.8 | 86.8 | 88.3 | 87.0 | 89.5 | 91.2 | 88.2 | 87.6 | 87.9 | | | | | | |
| Preferred - Memorable | 80.6 | 94.3 | none | 92.8 | none | 88.0 | 80.7 | none | 90.1 | none | 87.8 | | | | | | |
| Memorable - Trophy | none | 97.2 | none | none | none | none | none | none | none | none | 97.2 | | | | | | |
| Trophy | none | none | none | none | none | none | none | none | none | none | none | | | | | | |
| Mortality (winter gill net data) | | | | | | | | | | | | | | | | | |
| Total Mortality | N/A | N/A | 80% | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 80% | | | | | | |
| Stocking | | | | | | | | | | | | | | | | | |
| # per Acre | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| Angling Pressure (creel survey data - walleye data only) | | | | | | | | | | | | | | | | | |
| Angler Hours | 5,178 | No | No | No | No | 63,435 | No | 43,028 | 24,509 | No | 34,038 | | | | | | |
| Angler Hours/Acre | 0.17 | | | | | 2.08 | | 1.41 | 0.80 | | 1.12 | | | | | | |
| Fishing Success (creel survey data - walleye data) | | | | | | | | | | | | | | | | | |
| Percent Harvested | 21.6% | | | | | 76.3% | | 74.7% | 55.3% | | 57.0% | | | | | | |
| Mean Weight (pounds) | 1.89 | | | | | 1.88 | | 1.79 | 1.86 | | 1.86 | | | | | | |
| Value of Fishery (creel survey data - trip expenditures) | | | | | | | | | | | | | | | | | |
| All Sanders | \$33,040 | Survey | Survey | Survey | Survey | \$245,310 | Survey | \$166,090 | \$80,100 | Survey | \$131,135 | | | | | | |
| Walleye Data Only | \$5,010 | | | | | \$223,790 | | \$157,270 | \$73,150 | | \$114,805 | | | | | | |

Sunfish, Douglas Reservoir

| Sunfish | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|-----------------------------------------------------------------|----------|------|------|------|------|----------|------|---------|---------|------|----------|
| Angling Pressure (creel survey data - any sunfish) | | | | | | | | | | | |
| Angler Hours | * 31,338 | N | N | N | N | 73,120 | N | 4,976 | 1,986 | N | 27,855 |
| Angler Hours/Acre | 1.03 | ^ | ^ | o | o | 2.40 | o | 0.16 | 0.06 | o | 0.92 |
| Fishing Success (creel survey data - bluegill only) | | | | | | | | | | | |
| Catch Rate (bluegill) | 5.23 | S | S | S | S | 2.42 | S | 0.00 | 7.30 | S | 3.74 |
| Harvest Rate (bluegill) | 3.32 | u | u | u | u | 1.18 | u | 0.00 | 4.29 | u | 2.20 |
| % Harvested (bluegill) | 55.5% | r | r | r | r | 38.6% | r | 75.0% | 51.5% | r | 55.2% |
| Mean Weight (bluegill) | 0.28 | v | v | v | v | 0.28 | v | 0.07 | 0.22 | v | 0.21 |
| Value of Fishery (creel survey data - trip expenditures) | | | | | | | | | | | |
| Any Sunfish | \$12,640 | y | y | y | y | \$73,120 | y | \$5,690 | \$8,590 | y | \$25,010 |

Catfish, Douglas Reservoir

| Catfish | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|-----------------------------------------------------------------|----------|------|------|------|------|----------|------|-----------|----------|------|----------|
| Angling Pressure (creel survey data - any catfish) | | | | | | | | | | | |
| Angler Hours | 46,155 | N | N | N | N | 24,540 | N | 3,835 | 9,372 | N | 20,976 |
| Angler Hours/Acre | 1.52 | - | o | o | o | 0.80 | o | 0.80 | 0.30 | o | 0.69 |
| Fishing Success (creel survey data) | | | | | | | | | | | |
| Catch Rate (channel cat) | 0.93 | S | S | S | S | 0.34 | S | 0.00 | 0.26 | S | 0.38 |
| Harvest Rate (channel cat) | 0.61 | u | u | u | u | 0.21 | u | 0.00 | 0.11 | u | 0.23 |
| % Harvested (channel cat) | 62.5% | r | r | r | r | 80.6% | r | 27.0% | 26.9% | r | 49.3% |
| Mean Weight (channel cat) | 1.66 | v | v | v | v | 3.37 | v | 1.61 | 2.3 | v | 2.24 |
| Value of Fishery (creel survey data - trip expenditures) | | | | | | | | | | | |
| Any Catfish | \$23,200 | y | y | y | y | \$44,710 | y | \$101,500 | \$41,970 | y | \$52,845 |

Shad, Douglas Reservoir

| Shad | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|---------------------------------------------------------------------|--------|-------|-------|--------|--------|--------|--------|--------|--------|--------|-------|
| Density (summer shad gill net data - geometric mean density) | | | | | | | | | | | |
| Gizzard Shad | No | 19.51 | 7.74 | No | No | No | No | No | No | No | 15.59 |
| Threadfin Shad | Survey | 42.75 | 10.72 | Survey | Survey | Survey | Survey | Survey | Survey | Survey | 48.30 |
| Alewife | | 0.00 | 0 | | | | | | | | 0 |

Habitat Enhancement, Douglas Reservoir

| Type of Work | Details | Quantity | |
|------------------------------------|---------|----------|-----------|
| | | New | Renovated |
| Planted | N/A | | |
| Rebrushed | N/A | | |
| Checked and Refurbished stake beds | N/A | | |
| Rebrushed | N/A | | |
| Added | N/A | | |
| Installed | N/A | | |

Water Quality Monitoring, Douglas Reservoir

| Parameter | Sampling Period | Water Quality |
|------------------|-------------------|---------------|
| Temperature | July to September | normal |
| Dissolved Oxygen | July to September | normal |

Fort Loudoun Reservoir - 2016

Description

Area: 14,600 acres

Shoreline: 379 miles

Counties: Knox, Loudon, Blount

Full Pool Elevation (feet-msl): ~813

Winter Pool Elevation (feet-msl): ~807

Dam Completion: 1943

Lake-wide Angling Summary

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|-----------|-----------|------|------|-----------|------|------|-----------|------|
| Angling Pressure | | | | | | | | | | |
| Angler Hours | - | 197,702 | 220,585 | - | - | 152,819 | - | - | 148,482 | |
| Angler Hours Per Acre | - | 13.5 | 15.1 | - | - | 10.5 | - | - | 10.3 | |
| Angler Trips | - | 43,406 | 49,304 | - | - | 31,611 | - | - | 33,189 | |
| Value of Fishery (angler expenditures creel) | | | | | | | | | | |
| All Species | - | \$806,600 | \$823,930 | - | - | \$559,990 | - | - | \$605,250 | |

Black Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|------|-----------|-----------|------|------|-----------|------|------|-----------|------|
| Angling Pressure | | | | | | | | | | |
| All Black Bass (hrs) | - | 95,230 | 93,323 | - | - | 65,110 | - | - | 71,400 | |
| All Black Bass (hrs/acre) | - | 6.52 | 6.39 | - | - | 4.46 | - | - | 4.89 | |
| Any Black Bass (hrs) | - | 94,694 | 78,936 | - | - | 457 | - | - | 26,275 | |
| Any Black Bass (hrs/acre) | - | 6.49 | 5.41 | - | - | 0.03 | - | - | 1.80 | |
| Largemouth Bass (hrs) | - | 0 | 13,677 | - | - | 63,284 | - | - | 42,507 | |
| Largemouth Bass (hrs/acre) | - | 0.00 | 0.94 | - | - | 4.33 | - | - | 2.91 | |
| Smallmouth Bass (hrs) | - | 536 | 710 | - | - | 1,369 | - | - | 2,618 | |
| Smallmouth Bass (hrs/acre) | - | 0.04 | 0.05 | - | - | 0.09 | - | - | 0.18 | |
| Spotted Bass (hrs) | - | 0 | 0 | - | - | 0 | - | - | 0 | |
| Spotted Bass (hrs/acre) | - | 0.00 | 0.00 | - | - | 0.00 | - | - | 0.00 | |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| All Black Bass | - | \$490,470 | \$397,170 | - | - | \$313,430 | - | - | \$361,060 | |
| Any Black Bass | - | \$487,630 | \$386,360 | - | - | \$1,990 | - | - | \$141,640 | |
| Largemouth Bass | - | \$0 | \$6,890 | - | - | \$306,800 | - | - | \$208,920 | |
| Smallmouth Bass | - | \$2,840 | \$3,920 | - | - | \$4,640 | - | - | \$10,500 | |
| Spotted Bass | - | \$0 | \$0 | - | - | \$0 | - | - | \$0 | |

Largemouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-------|-------|-------|-------|------|-------|------|------|-------|------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 16.67 | 22.00 | 15.20 | 4.33 | - | - | 3.60 | 0.40 | - | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | 71 | 51 | 64 | 72 | - | - | 65 | 79 | - | - |
| RSD (preferred) | 19 | 16 | 16 | 23 | - | - | 29 | 44 | - | - |
| CPUE (total) | 97.0 | 162.0 | 104.0 | 92.7 | - | - | 44.8 | 43.6 | - | - |
| CPUE ≥ Stock | 80.3 | 140.0 | 88.8 | 88.4 | - | - | 41.2 | 43.2 | - | - |
| CPUE ≥ MLL (14-inches) | 23.7 | 36.0 | 24.8 | 28.0 | - | - | 16.8 | 22.8 | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | 7.4 | - |
| Length Age-3 | - | - | - | - | - | - | - | - | 13.3 | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 86.3 | 95.1 | 91.3 | 84.6 | - | - | 87.2 | 80.7 | 90.3 | - |
| Quality | 89.5 | 94.3 | 91.9 | 85.8 | - | - | 90.2 | 85.0 | 97.2 | - |
| Preferred | 91.7 | 96.2 | 99.6 | 94.7 | - | - | 92.4 | 94.2 | 102.3 | - |
| Memorable | 103.1 | 98.4 | - | 102.8 | - | - | 91.9 | 95.3 | 103.3 | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | 37.0% | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | - | 0.46 | - | - | 1.10 | - | - | 1.26 | - |
| Harvest Rate (intended) | - | - | 0.09 | - | - | 0.02 | - | - | 0.00 | - |
| % Released | - | 96.5% | 97.4% | - | - | 98.3% | - | - | 99.7% | - |
| Mean Weight | - | 2.44 | 2.89 | - | - | 3.31 | - | - | 3.65 | - |

Smallmouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-------|-------|-------|------|------|--------|------|------|-------|------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 10.00 | 6.00 | 0.80 | 0.33 | - | - | 0.00 | 0.00 | - | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | 38 | 48 | 64 | 71 | - | - | 20 | 40 | - | - |
| RSD (preferred) | 13 | 26 | 36 | 29 | - | - | - | 20 | - | - |
| CPUE (preferred) | 1.0 | 1.3 | 1.6 | 1.3 | - | - | 0.0 | 0.4 | - | - |
| CPUE (memorable) | 0.0 | 0.7 | 0.8 | 1.0 | - | - | 0.0 | 0.4 | - | - |
| CPUE (trophy) | 0.0 | 0.3 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | - | - |
| CPUE (total) | 18.0 | 15.0 | 5.2 | 8.3 | - | - | 4.0 | 2.0 | - | - |
| CPUE \geq Stock | 8.0 | 9.0 | 4.4 | 8.0 | - | - | 4.0 | 2.0 | - | - |
| CPUE \geq Preferred | 1.0 | 2.3 | 2.4 | 2.3 | - | - | 0.0 | 0.8 | - | - |
| CPUE \geq MLL (18-inches) | 0.0 | 0.7 | 0.8 | 0.0 | - | - | 0.0 | 0.4 | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | 6.2 | - |
| Length Age-3 | - | - | - | - | - | - | - | - | 12.9 | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 85.1 | 83.6 | 81.5 | 77.6 | - | - | 78.9 | 73.2 | 83.5 | - |
| Quality | 81.5 | 90.5 | 85.2 | 73.8 | - | - | 69.5 | 70.5 | 80.8 | - |
| Preferred | 79.6 | 73.4 | 83.6 | 78.1 | - | - | - | 79.5 | 79.9 | - |
| Memorable | - | 80.6 | 80.0 | 82.1 | - | - | - | - | 83.5 | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | 28.0% | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | 0.25 | 0.77 | - | - | 1.33 | - | - | 0.56 | - |
| Harvest Rate (intended) | - | 0.00 | 0.15 | - | - | 0.00 | - | - | 0.00 | - |
| % Released | - | 99.4% | 97.9% | - | - | 100.0% | - | - | 99.8% | - |
| Mean Weight | - | 3.75 | 3.16 | - | - | - | - | - | 3.75 | - |

Black Crappie

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|-----------|-----------|------|------|-----------|------|------|-----------|------|
| Density (electrofishing) | | | | | | | | | | |
| PSD | 100 | 99 | 100 | 100 | - | - | 100 | 90 | - | - |
| RSD (preferred) | 36 | 65 | 38 | 72 | - | - | 38 | 19 | - | - |
| CPUE (total) | 9.3 | 23.0 | 10.4 | 6.0 | - | - | 5.2 | 12.4 | - | - |
| CPUE \geq Stock | 9.3 | 23.0 | 10.4 | 6.0 | - | - | 5.2 | 12.4 | - | - |
| CPUE \geq MLL (10-inches) | 3.3 | 15.0 | 4.0 | 3.7 | - | - | 2.0 | 2.0 | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | 96.9 | - | - | - | - | - | 83.2 | - | - |
| Quality | 92.8 | 101.1 | 94.0 | 89.1 | - | - | 83.2 | 83.9 | - | - |
| Preferred | 92.5 | 95.9 | 91.4 | 91.0 | - | - | 90.1 | 75.0 | - | - |
| Memorable | 87.7 | 91.7 | 85.8 | - | - | - | 89.9 | 75.8 | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | - | 53,849 | 62,013 | - | - | 43,767 | - | - | 35,126 | - |
| Angler Hours/Acre | - | 3.7 | 4.2 | - | - | 3.0 | - | - | 2.4 | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | - | 1.42 | 1.74 | - | - | 2.15 | - | - | 2.09 | - |
| Harvest Rate (any crappie) | - | 0.61 | 0.75 | - | - | 0.94 | - | - | 1.00 | - |
| % Released (black crappie) | - | 40.5% | 23.4% | - | - | 56.6% | - | - | 53.5% | - |
| Mean Weight (black crappie) | - | 1.13 | 1.19 | - | - | 1.35 | - | - | 1.08 | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | - | \$164,360 | \$198,060 | - | - | \$153,130 | - | - | \$109,490 | - |

White Crappie

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|-----------|-----------|------|------|-----------|------|------|-----------|------|
| Density (electrofishing) | | | | | | | | | | |
| PSD | 100 | 100 | 100 | 96 | - | - | 94 | 91 | - | - |
| RSD (preferred) | 86 | 90 | 70 | 97 | - | - | 38 | 35 | - | - |
| CPUE (total) | 11.7 | 20.7 | 12.4 | 9.3 | - | - | 26.0 | 21.6 | - | - |
| CPUE \geq Stock | 11.7 | 20.7 | 12.0 | 9.3 | - | - | 26.0 | 21.6 | - | - |
| CPUE \geq MLL (10-inches) | 10.0 | 18.7 | 8.4 | 8.0 | - | - | 7.6 | 6.4 | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | 81.7 | 90.0 | - | - |
| Quality | 90.3 | 98.7 | 103.8 | 89.9 | - | - | 89.8 | 86.7 | - | - |
| Preferred | 90.8 | 98.0 | 92.1 | 95.6 | - | - | 88.1 | 89.5 | - | - |
| Memorable | 87.9 | 97.3 | 88.0 | 91.5 | - | - | 89.6 | 83.3 | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | - | 53,849 | 62,013 | - | - | 43,767 | - | - | 35,126 | - |
| Angler Hours/Acre | - | 3.7 | 4.2 | - | - | 3.0 | - | - | 2.4 | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | - | 1.42 | 1.74 | - | - | 2.15 | - | - | 2.09 | - |
| Harvest Rate (any crappie) | - | 0.61 | 0.75 | - | - | 0.94 | - | - | 1.00 | - |
| % Released (w hite crappie) | - | 63.4% | 61.1% | - | - | 60.2% | - | - | 59.7% | - |
| Mean Weight (w hite crappie) | - | 0.90 | 0.97 | - | - | 1.18 | - | - | 0.80 | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | - | \$164,360 | \$198,060 | - | - | \$153,130 | - | - | \$109,490 | - |

Sunfish

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|----------|----------|------|------|----------|------|------|---------|------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all sunfish) | - | 5,052 | 6,114 | - | - | 7,124 | - | - | 2,161 | - |
| Angler Hours/Acre | - | 0.3 | 0.4 | - | - | 0.5 | - | - | 0.1 | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any sunfish) | - | 1.66 | 2.50 | - | - | 2.38 | - | - | 7.06 | - |
| Harvest Rate (any sunfish) | - | 0.42 | 1.40 | - | - | 0.84 | - | - | 3.83 | - |
| % Released (bluegill) | - | 83.0% | 71.5% | - | - | 69.9% | - | - | 73.5% | - |
| Mean Weight (bluegill) | - | 0.67 | 0.58 | - | - | 0.67 | - | - | 0.45 | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Sunfish | - | \$14,020 | \$15,800 | - | - | \$15,260 | - | - | \$5,350 | - |

Catfish

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|------|----------|----------|------|------|----------|------|------|----------|------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all catfish) | - | 9,449 | 14,431 | - | - | 6,268 | - | - | 6,201 | - |
| Angler Hours/Acre | - | 0.6 | 1.0 | - | - | 0.4 | - | - | 0.4 | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any catfish) | - | 0.43 | 0.70 | - | - | 0.27 | - | - | 0.00 | - |
| Harvest Rate (any catfish) | - | 0.09 | 0.25 | - | - | 0.15 | - | - | 0.00 | - |
| % Released (channel) | - | 100.0% | 68.3% | - | - | 43.3% | - | - | 45.5% | - |
| Mean Weight (channel) | - | - | 5.08 | - | - | 4.15 | - | - | 4.01 | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Catfish | - | \$38,700 | \$45,800 | - | - | \$15,530 | - | - | \$28,670 | - |

Habitat Enhancement

| Type of Work | Details | Quantity | |
|--------------|----------------------------|----------|-----------|
| | | New | Renovated |
| Rebrush | Christmas trees with block | none | none |

Patrick Henry Reservoir

Description

| | |
|------------------------------------------------------------|-----------------------------------------------------|
| Surface Area: 872 acres | Shoreline Distance: 127 miles |
| Counties: Sullivan | Drainage Area: 1903 square miles |
| Full Pool Elevation: 1263 feet above mean sea level | Mean Annual Fluctuation: 5 feet |
| Maximum Depth: 76 feet | Thermocline Depth: 9 feet |
| Mean Chlorophyll (Forebay): 11.1 parts per million | Shoreline Development: 34% |
| Trophic Status (Forebay): Mesotrophic | Trophic Index, Carlson (1977): 54.2 |
| Hydraulic Retention Time: 38 days | Reservoir Age: 63 years (dam completed 1953) |
| Total Fishing Effort: No Creel in 2016 | Total Value by Anglers: No Creel in 2016 |

Summary:

Electrofishing

The 2016 largemouth bass catch rates were below average. The low largemouth catch rates could be due to cooler water temperatures. The overall size structure of largemouth bass in the reservoir was good. A PSD value of 69 indicates that the size structure is good for largemouth bass. An RSD-P value of 42 indicates that the population also had a desired proportion of preferred length (15-inch) in the population. The relative weights for the larger fish were above average for East Tennessee reservoirs; this is probably due to the good forage base of larger gizzard shad in the reservoir.

Smallmouth bass catch rates were well above average again this year, with a catch rate of 37.6 fish/hour. The catch rate for smallmouth bass over the 18-inch minimum size limit was also above average. Hopefully, the increase in larger size smallmouth bass will continue in this reservoir and will lead to a higher quality smallmouth bass fishery. The relative weights for smallmouth were slightly about average for east Tennessee reservoirs.

We are very excited that we are starting to see some of the Rockcastle strain walleye showing up in our samples. We collected 3 walleye in 2014 and 2 during the 2015 reservoir sample. This year we collected 41 is our reservoir electrofishing sample. The stream survey crew collected is also collecting a few walleye in their samples fish near Boone dam. This is very promising and shows good survival of stocked fish.

Gill Netting

There was not any gillnetting conducted on Ft. Patrick Henry in 2016. With the continued stocking efforts for the rockcastle strain walleye, we plan to continue to monitor this population through electrofishing and gillnetting.

Trap Netting

There was no trap netting conducted on Ft. Patrick Henry reservoir in 2016.

Habitat Enhancement

There was no habitat enhancement work conducted on Ft. Patrick Henry reservoir in 2016.

Water Quality

There was no water quality sampling conducted on Ft. Patrick Henry in 2016.

Lakewide Angling Summary**Total Effort and Expenditures**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Angling Pressure | | | | | | | | | | |
| Angler Hours | no survey | no survey | no survey | no survey | no survey | no survey | 63,434 | no survey | no survey | no survey |
| Angler Hours Per Acre | no survey | no survey | no survey | no survey | no survey | no survey | 72.8 | no survey | no survey | no survey |
| Angler Trips | no survey | no survey | no survey | no survey | no survey | no survey | 15,491 | no survey | no survey | no survey |
| Value of Fishery (angler expenditures creel) | | | | | | | | | | |
| All Species | no survey | no survey | no survey | no survey | no survey | no survey | \$177,420 | no survey | no survey | no survey |

Largemouth Bass, Patrick Henry**Largemouth Bass**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|---------------------------------------------------------------|------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| Recruitment (electrofishing data - CPUE = # fish/hour) | | | | | | | | | | | |
| Age-1 CPUE | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Substock CPUE | 3.2 | 12.8 | 13.6 | 8.0 | 9.6 | 11.2 | 6.4 | 7.2 | 7.2 | 7.2 | 8.6 |
| Density (electrofishing data - CPUE = # fish/hour) | | | | | | | | | | | |
| PSD | 79% | 76% | 70% | 50% | 78% | 73% | 76% | 66% | 81% | 69% | 72% |
| RSD - Preferred | 47% | 40% | 49% | 32% | 57% | 45% | 53% | 36% | 36% | 42% | 44% |
| CPUE | 33.6 | 52.8 | 78.4 | 67.2 | 70.4 | 88.8 | 62.4 | 66.4 | 36.0 | 43.2 | 59.9 |
| CPUE ≥ Stock | 30.4 | 40.0 | 64.8 | 59.2 | 60.8 | 77.6 | 56.0 | 59.2 | 28.8 | 36.0 | 51.3 |
| Growth (electrofishing data) | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Mean TL at Age-3 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Relative Weight (electrofishing data) | | | | | | | | | | | |
| Stock - Quality | 90.7 | 89.5 | 87.9 | 90.8 | 84.0 | 82.0 | 84.4 | 80.8 | 85.3 | 88.7 | 86.4 |
| Quality - Preferred | 94.2 | 93.9 | 98.0 | 91.4 | 93.1 | 88.6 | 96.7 | 87.4 | 92.8 | 88.6 | 92.5 |
| Preferred - Memorable | 96.8 | 100.8 | 98.5 | 102.6 | 100.7 | 93.8 | 103.7 | 93.4 | 93.7 | 93.2 | 97.7 |
| Memorable - Trophy | none | 117.8 | 94.2 | 104.8 | 98.8 | 105.1 | 106.3 | 109.0 | 101.3 | 105.3 | 104.7 |
| Trophy | none | none | none | none | none | none | none | none | none | none | none |
| Mortality (electrofishing data) | | | | | | | | | | | |
| Total Mortality | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

Smallmouth Bass, Patrick Henry

| Smallmouth Bass | | | | | | | | | | | |
|---------------------------------------------------------------|------|------|-------|------|------|------|------|------|-------|------|------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
| Recruitment (electrofishing data - CPUE = # fish/hour) | | | | | | | | | | | |
| Age-1 CPUE | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Substock CPUE | 8.0 | 11.2 | 5.6 | 9.6 | 7.2 | 2.4 | 2.4 | 5.6 | 7.2 | 19.2 | 7.8 |
| Density (electrofishing data - CPUE = # fish/hour) | | | | | | | | | | | |
| PSD | 67% | 52% | 67% | 63% | 74% | 93% | 76% | 78% | 76% | 70% | 72% |
| RSD - Preferred | 52% | 24% | 48% | 54% | 51% | 75% | 59% | 50% | 45% | 48% | 51% |
| CPUE | 29.6 | 37.6 | 22.4 | 28.8 | 38.4 | 34.4 | 16.0 | 34.4 | 37.6 | 37.6 | 31.7 |
| CPUE ≥ Stock | 21.6 | 26.4 | 16.8 | 19.2 | 31.2 | 32.0 | 13.6 | 28.8 | 30.4 | 18.4 | 23.8 |
| CPUE ≥ MSL (18")* | N/A | 3.2 | 0.8 | 1.6 | 4.0 | 7.2 | 4.0 | 1.6 | 3.2 | 4.0 | 3.3 |
| Growth (electrofishing data) | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Mean TL at Age-3 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Relative Weight (electrofishing data) | | | | | | | | | | | |
| Stock - Quality | 93.2 | 84.8 | 81.7 | 78.4 | 79.1 | 76.6 | 78.6 | 77.9 | 77.0 | 83.5 | 81.1 |
| Quality - Preferred | 81.2 | 85.5 | 85.2 | 83.0 | 87.6 | 83.6 | 79.5 | 80.1 | 87.0 | 87.9 | 84.1 |
| Preferred - Memorable | 82.8 | 84.6 | 86.3 | 84.0 | 84.4 | 79.8 | 88.4 | 76.0 | 80.7 | 76.4 | 82.3 |
| Memorable - Trophy | 85.2 | 81.4 | 104.5 | 76.8 | 84.6 | 79.8 | 85.7 | 73.5 | 101.3 | 78.4 | 85.1 |
| Trophy | none | none | none | none | none | none | none | none | none | none | none |
| Mortality (electrofishing data) | | | | | | | | | | | |
| Total Mortality | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

* 18" MLL in effect in 2008

Habitat Enhancement - 2016

| Type of Work | Details | Quantity | |
|-----------------------------------|---------|----------|-----------|
| | | New | Renovated |
| Planted | n/a | | |
| Rebrushed | n/a | | |
| Checked and Refurbishe stake beds | n/a | | |
| Rebrushed | n/a | | |
| Added | n/a | | |
| Installed | n/a | | |

Water Quality Monitoring - 2016

| Parameter | Sampling Period | Water Quality |
|------------------|-------------------|---------------|
| Temperature | July to September | n/a |
| Dissolved Oxyged | July to September | n/a |

Melton Hill Reservoir - 2016

Description

Area: 5,690 acres

Shoreline: 170 miles

Counties: Anderson, Knox, Loudon, Roane

Full Pool Elevation (feet-msl): ~795

Winter Pool Elevation (feet-msl): ~792

Dam Completion: 1963

Lake-wide Angling Summary

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|------|------|------|-----------|
| Angling Pressure | | | | | | | | | | |
| Angler Hours | 74,185 | 87,914 | 103,258 | 77,098 | 60,624 | 60,995 | - | - | - | 87,816 |
| Angler Hours Per Acre | 13.0 | 15.5 | 18.1 | 13.5 | 10.7 | 10.7 | - | - | - | 15.4 |
| Angler Trips | 19,039 | 22,458 | 24,464 | 20,008 | 14,873 | 12,717 | - | - | - | 25,667 |
| Value of Fishery (angler expenditures creel) | | | | | | | | | | |
| All Species | \$258,360 | \$382,190 | \$379,910 | \$342,040 | \$288,600 | \$217,540 | - | - | - | \$261,360 |

Black Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|------|------|------|-----------|
| Angling Pressure | | | | | | | | | | |
| All Black Bass (hrs) | 23,804 | 36,214 | 36,480 | 28,017 | 26,871 | 26,067 | - | - | - | 36,895 |
| All Black Bass (hrs/acre) | 4.18 | 6.36 | 6.41 | 4.92 | 4.72 | 4.58 | - | - | - | 6.48 |
| Any Black Bass (hrs) | 23,804 | 36,214 | 36,280 | 1,504 | 0 | 346 | - | - | - | 31,236 |
| Any Black Bass (hrs/acre) | 4.18 | 6.36 | 6.38 | 0.26 | 0.00 | 0.06 | - | - | - | 5.49 |
| Largemouth Bass (hrs) | 0 | 0 | 200 | 26,368 | 26,871 | 25,721 | - | - | - | 5,244 |
| Largemouth Bass (hrs/acre) | 0.00 | 0.00 | 0.04 | 4.63 | 4.72 | 4.52 | - | - | - | 0.92 |
| Smallmouth Bass (hrs) | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | 415 |
| Smallmouth Bass (hrs/acre) | 0.00 | 0.00 | 0.07 | 0.11 | 0.04 | 0.00 | - | - | - | 0.07 |
| Spotted Bass (hrs) | 0 | 0 | 0 | 145 | 0 | 0 | - | - | - | 0 |
| Spotted Bass (hrs/acre) | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 | - | - | - | 0.00 |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| All Black Bass | \$110,260 | \$196,560 | \$175,440 | \$143,820 | \$164,200 | \$122,280 | - | - | - | \$208,190 |
| Any Black Bass | \$110,260 | \$196,560 | \$174,010 | \$8,160 | \$0 | \$1,130 | - | - | - | \$192,620 |
| Largemouth Bass | \$0 | \$0 | \$910 | \$133,520 | \$163,330 | \$121,150 | - | - | - | \$15,570 |
| Smallmouth Bass | \$0 | \$0 | \$520 | \$1,800 | \$870 | \$0 | - | - | - | \$0 |
| Spotted Bass | \$0 | \$0 | \$0 | \$340 | \$0 | \$0 | - | - | - | \$0 |

Largemouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-------|-------|-------|-------|-------|-------|------|------|------|-------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 11.30 | 9.30 | 11.67 | 19.33 | - | - | - | - | - | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | 40 | 58 | 71 | 66 | - | - | - | - | - | - |
| RSD (preferred) | 10 | 8 | 16 | 22 | - | - | - | - | - | - |
| CPUE (total) | 98.3 | 153.3 | 86.0 | 99.7 | - | - | - | - | - | - |
| CPUE ≥ Stock | 87.0 | 144.0 | 74.3 | 80.3 | - | - | - | - | - | - |
| CPUE ≥ MLL (14-inches) | 11.0 | 22.3 | 20.7 | 29.6 | - | - | - | - | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | 5.6 | - | - | - | - | - | - | - | - | - |
| Length Age-3 | 9.5 | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 85.0 | 86.0 | 80.2 | 79.2 | - | - | - | - | - | - |
| Quality | 87.1 | 86.3 | 80.7 | 80.1 | - | - | - | - | - | - |
| Preferred | 87.3 | 89.3 | 86.7 | 84.2 | - | - | - | - | - | - |
| Memorable | 83.9 | - | 93.8 | 84.3 | - | - | - | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | 47.0% | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | - | 0.42 | 0.59 | 0.97 | 1.09 | - | - | - | 1.31 |
| Harvest Rate (intended) | - | - | 0.00 | 0.01 | 0.04 | 0.04 | - | - | - | 0.00 |
| % Released | 99.4% | 95.0% | 97.3% | 98.6% | 95.3% | 96.6% | - | - | - | 97.9% |
| Mean Weight | 2.76 | 2.29 | 2.36 | 2.39 | 2.33 | 2.91 | - | - | - | 1.82 |

Smallmouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|--------|--------|-------|--------|-------|-------|------|------|------|--------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 1.00 | 0.30 | 0.33 | 1.67 | - | - | - | - | - | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | 45 | 77 | 79 | 43 | - | - | - | - | - | - |
| RSD (preferred) | 10 | 36 | 36 | 24 | - | - | - | - | - | - |
| CPUE (preferred) | 2.3 | 3.0 | 1.7 | 1.3 | - | - | - | - | - | - |
| CPUE (memorable) | 0.0 | 0.3 | 0.0 | 0.3 | - | - | - | - | - | - |
| CPUE (trophy) | 0.0 | 0.0 | 0.0 | 0.0 | - | - | - | - | - | - |
| CPUE (total) | 7.7 | 7.7 | 5.0 | 8.7 | - | - | - | - | - | - |
| CPUE > Stock | 6.7 | 7.4 | 4.7 | 7.0 | - | - | - | - | - | - |
| CPUE ≥ Preferred | 2.3 | 3.3 | 1.7 | 1.6 | - | - | - | - | - | - |
| CPUE ≥ MLL (18-inches) | 0.0 | 0.0 | 0.0 | 0.3 | - | - | - | - | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 86.5 | 82.4 | 84.1 | 78.1 | - | - | - | - | - | - |
| Quality | 81.8 | 78.5 | 78.5 | 74.3 | - | - | - | - | - | - |
| Preferred | 79.5 | 76.6 | 75.6 | 74.3 | - | - | - | - | - | - |
| Memorable | - | 79.4 | - | 79.2 | - | - | - | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | - | 0.17 | 0.12 | 0.36 | 0.00 | - | - | - | 0.38 |
| Harvest Rate (intended) | - | - | 0.00 | 0.00 | 0.00 | 0.00 | - | - | - | 0.00 |
| % Released | 100.0% | 100.0% | 99.0% | 100.0% | 98.5% | 88.8% | - | - | - | 100.0% |
| Mean Weight | - | - | 4.13 | - | 3.50 | 3.73 | - | - | - | - |

Spotted Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|--------|--------|------|--------|------|------|------|------|------|--------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 0.70 | 0.00 | 0.00 | 0.33 | - | - | - | - | - | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | - | 33 | 33 | 29 | - | - | - | - | - | - |
| RSD (preferred) | - | 17 | - | 6 | - | - | - | - | - | - |
| CPUE (total) | 2.0 | 2.0 | 1.0 | 6.0 | - | - | - | - | - | - |
| CPUE ≥ Stock | 1.3 | 2.0 | 1.0 | 5.7 | - | - | - | - | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 96.6 | 85.4 | 94.1 | 83.5 | - | - | - | - | - | - |
| Quality | - | 94.0 | 78.0 | 75.1 | - | - | - | - | - | - |
| Preferred | - | 88.1 | - | 84.9 | - | - | - | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | - | - | - | - | - | - | - | - | - |
| Harvest Rate (intended) | - | - | - | - | - | - | - | - | - | - |
| % Released | 100.0% | 100.0% | - | 100.0% | - | - | - | - | - | 100.0% |
| Mean Weight | - | - | - | - | - | - | - | - | - | - |

Black Crappie

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|----------|----------|----------|----------|----------|----------|------|------|------|----------|
| Density (electrofishing) | | | | | | | | | | |
| PSD | 100 | 100 | - | 100 | - | - | - | - | - | - |
| RSD (preferred) | 90 | 86 | - | 100 | - | - | - | - | - | - |
| CPUE (total) | 3.3 | 2.3 | - | 0.7 | - | - | - | - | - | - |
| CPUE \geq Stock | 3.3 | 2.3 | - | 0.7 | - | - | - | - | - | - |
| CPUE \geq MLL (10-inches) | 3.0 | 2.0 | - | 0.7 | - | - | - | - | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | 78.1 | 94.7 | - | - | - | - | - | - | - | - |
| Preferred | 86.5 | 91.6 | - | 87.1 | - | - | - | - | - | - |
| Memorable | 79.4 | 81.1 | - | - | - | - | - | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 14,995 | 14,091 | 13,011 | 7,916 | 3,791 | 4,149 | - | - | - | 0 |
| Angler Hours/Acre | 2.6 | 2.5 | 2.3 | 1.4 | 0.7 | 0.7 | - | - | - | 0.0 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 0.95 | 0.73 | 0.96 | 0.94 | 0.86 | 0.64 | - | - | - | 3.02 |
| Harvest Rate (any crappie) | 0.24 | 0.28 | 0.28 | 0.31 | 0.50 | 0.37 | - | - | - | 0.15 |
| % Released (black crappie) | 79.2% | 13.3% | - | 60.5% | - | - | - | - | - | 96.7% |
| Mean Weight (black crappie) | 0.86 | 1.13 | - | 1.35 | - | - | - | - | - | 0.80 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | \$53,160 | \$47,290 | \$49,870 | \$31,870 | \$19,690 | \$12,180 | - | - | - | \$13,920 |

White Crappie

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|----------|----------|----------|----------|----------|----------|------|------|------|----------|
| Density (electrofishing) | | | | | | | | | | |
| PSD | 97 | 100 | 100 | 100 | - | - | - | - | - | - |
| RSD (preferred) | 51 | 81 | 69 | 92 | - | - | - | - | - | - |
| CPUE (total) | 22.7 | 19.0 | 8.7 | 4.3 | - | - | - | - | - | - |
| CPUE \geq Stock | 22.7 | 19.0 | 8.7 | 4.3 | - | - | - | - | - | - |
| CPUE \geq MLL (10-inches) | 11.0 | 14.7 | 6.0 | 4.0 | - | - | - | - | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | 85.3 | - | - | - | - | - | - | - | - | - |
| Quality | 86.6 | 94.7 | 91.5 | 81.6 | - | - | - | - | - | - |
| Preferred | 83.8 | 92.2 | 84.5 | 87.1 | - | - | - | - | - | - |
| Memorable | 83.6 | 89.0 | 84.0 | 82.0 | - | - | - | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 14,995 | 14,091 | 13,011 | 7,916 | 3,791 | 4,149 | - | - | - | 0 |
| Angler Hours/Acre | 2.6 | 2.5 | 2.3 | 1.4 | 0.7 | 0.7 | - | - | - | 0.0 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 0.95 | 0.73 | 0.96 | 0.94 | 0.86 | 0.64 | - | - | - | 3.02 |
| Harvest Rate (any crappie) | 0.24 | 0.28 | 0.28 | 0.31 | 0.50 | 0.37 | - | - | - | 0.15 |
| % Released (white crappie) | 81.3% | 70.4% | 75.4% | 75.1% | 44.8% | 35.9% | - | - | - | 93.5% |
| Mean Weight (white crappie) | 0.75 | 0.83 | 0.96 | 1.05 | 1.00 | 1.28 | - | - | - | 0.78 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | \$53,160 | \$47,290 | \$49,870 | \$31,870 | \$19,690 | \$12,180 | - | - | - | \$13,920 |

Muskie

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|----------|----------|----------|----------|----------|----------|-------|-------|-------|----------|
| Stocking | | | | | | | | | | |
| # | 3,162 | 1,520 | 2,629 | 4,510 | 5,486 | 5,342 | 4,565 | 2,973 | 5,007 | 2,000 |
| #/Acre | 0.6 | 0.3 | 0.5 | 0.8 | 1.0 | 0.9 | 0.8 | 0.5 | 0.9 | 0.4 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | 3,802 | 2,175 | 5,585 | 6,999 | 4,790 | 4,789 | - | - | - | 2,097 |
| Angler Hours/Acre | 0.7 | 0.4 | 1.0 | 1.2 | 0.8 | 0.8 | - | - | - | 0.4 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0.02 | 0.03 | 0.03 | 0.07 | 0.04 | 0.02 | - | - | - | 0.01 |
| Harvest Rate (intended) | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | - | - | - | 0.00 |
| % Released | 100.0% | 100.0% | 100.0% | 95.0% | 100.0% | 100.0% | - | - | - | 100.0% |
| Mean Weight | - | - | - | - | - | - | - | - | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Musky | \$16,960 | \$16,530 | \$42,580 | \$50,260 | \$30,210 | \$20,960 | - | - | - | \$12,510 |

Striped Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|----------|----------|----------|----------|----------|----------|------|------|------|--------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | 4,159 | 6,545 | 4,537 | 5,243 | 5,330 | 3,182 | - | - | - | 231 |
| Angler Hours/Acre | 0.7 | 1.2 | 0.8 | 0.9 | 0.9 | 0.6 | - | - | - | 0.0 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0.10 | 0.06 | 0.06 | 0.10 | 0.07 | 0.08 | - | - | - | 0.13 |
| Harvest Rate (intended) | 0.03 | 0.00 | 0.00 | 0.02 | 0.01 | 0.00 | - | - | - | 0.00 |
| % Released | 97.4% | 100.0% | 100.0% | 91.2% | 94.1% | 100.0% | - | - | - | 100.0% |
| Mean Weight | 38.80 | - | - | 10.24 | 22.40 | - | - | - | - | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Striped Bass | \$13,630 | \$50,480 | \$18,460 | \$34,030 | \$29,970 | \$18,070 | - | - | - | - |

Sunfish

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|---------|----------|---------|---------|---------|---------|------|------|------|-------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all sunfish) | 796 | 2,295 | 2,581 | 677 | 514 | 2,032 | - | - | - | 2,376 |
| Angler Hours/Acre | 0.1 | 0.4 | 0.5 | 0.1 | 0.1 | 0.4 | - | - | - | 0.4 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any sunfish) | 1.80 | 1.73 | 1.53 | 2.64 | 1.89 | 1.88 | - | - | - | 1.93 |
| Harvest Rate (any sunfish) | 0.00 | 0.64 | 0.75 | 1.39 | 1.81 | 0.82 | - | - | - | 0.00 |
| % Released (bluegill) | 95.2% | 89.8% | 70.1% | 77.8% | 7790.0% | 76.0% | - | - | - | 94.2% |
| Mean Weight (bluegill) | 0.45 | 0.58 | 0.41 | 0.64 | 0.64 | 0.70 | - | - | - | 0.27 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Sunfish | \$2,270 | \$10,710 | \$7,230 | \$3,060 | \$1,340 | \$3,000 | - | - | - | - |

Catfish

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|---------|---------|----------|----------|---------|---------|------|------|------|-------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all catfish) | 1,877 | 1,703 | 2,811 | 4,169 | 542 | 2,484 | - | - | - | 1,913 |
| Angler Hours/Acre | 0.3 | 0.3 | 0.5 | 0.7 | 0.1 | 0.4 | - | - | - | 0.3 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any catfish) | 0.72 | 0.10 | 0.19 | 0.20 | 0.18 | 0.15 | - | - | - | 0.09 |
| Harvest Rate (any catfish) | 0.08 | 0.00 | 0.07 | 0.13 | 0.18 | 0.15 | - | - | - | 0.04 |
| % Released (channel) | - | 100.0% | 89.4% | 84.9% | 0.0% | - | - | - | - | 79.2% |
| Mean Weight (channel) | - | - | - | 4.10 | 1.90 | - | - | - | - | 3.88 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Catfish | \$5,550 | \$4,740 | \$12,500 | \$17,910 | \$1,840 | \$4,790 | - | - | - | - |

Habitat Enhancement

| Type of Work | Details | Quantity | |
|--------------|----------------------------|----------|-----------|
| | | New | Renovated |
| Rebrush | Christmas trees with block | none | none |

Norris Reservoir - 2016

Description

Area: 34,200 acres

Shoreline: 809 miles

Counties: Union, Grainger, Claiborne, Campbell, Anderson

Full Pool Elevation (feet-msl): ~1020

Winter Pool Elevation (feet-msl): ~990

Dam Completion: 1936

Lake-wide Angling Summary

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-------------|-------------|-----------|-----------|------|-------------|-----------|-------------|-------------|-------------|
| Angling Pressure | | | | | | | | | | |
| Angler Hours | 334,986 | 346,327 | 308,259 | 291,245 | - | 286,759 | 221,108 | 238,886 | 228,567 | 324,385 |
| Angler Hours Per Acre | 9.8 | 10.1 | 9.0 | 8.5 | - | 8.4 | 6.5 | 7.0 | 6.7 | 9.5 |
| Angler Trips | 65,537 | 66,546 | 57,970 | 58,799 | - | 58,582 | 50,515 | 54,734 | 49,241 | 72,624 |
| Value of Fishery (angler expenditures creel) | | | | | | | | | | |
| All Species | \$1,351,870 | \$2,019,560 | \$971,690 | \$857,590 | - | \$1,388,060 | \$845,120 | \$1,360,120 | \$1,149,440 | \$4,785,170 |

Black Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|-----------|-------------|-----------|-----------|------|-----------|-----------|-----------|-----------|-------------|
| Angling Pressure | | | | | | | | | | |
| All Black Bass (hrs) | 142,592 | 161,902 | 134,166 | 136,794 | - | 130,575 | 118,438 | 114,460 | 118,547 | 182,587 |
| (hrs/acre) | 4.17 | 4.73 | 3.92 | 4.00 | - | 3.82 | 3.46 | 3.35 | 3.47 | 5.34 |
| Any Black Bass (hrs) | 113,634 | 124,831 | 94,181 | 81,944 | - | 85,571 | 78,858 | 79,410 | 72,625 | 124,441 |
| (hrs/acre) | 3.32 | 3.65 | 2.75 | 2.40 | - | 2.50 | 2.31 | 2.32 | 2.12 | 3.64 |
| Largemouth Bass (hrs) | 339 | 2,244 | 2,381 | 9,719 | - | 2,574 | 6,182 | 4,665 | 3,178 | 836 |
| (hrs/acre) | 0.01 | 0.07 | 0.07 | 0.28 | - | 0.08 | 0.18 | 0.14 | 0.09 | 0.02 |
| Smallmouth Bass (hrs) | 28,619 | 32,140 | 36,691 | 44,573 | - | 41,945 | 33,398 | 30,385 | 42,744 | 57,310 |
| (hrs/acre) | 0.84 | 0.94 | 1.07 | 1.30 | - | 1.23 | 0.98 | 0.89 | 1.25 | 1.68 |
| Spotted Bass (hrs) | 0 | 2,687 | 913 | 558 | - | 485 | 0 | 0 | 0 | 0 |
| (hrs/acre) | 0.00 | 0.08 | 0.03 | 0.02 | - | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| All Black Bass | \$712,800 | \$1,186,900 | \$469,620 | \$514,300 | - | \$753,570 | \$596,350 | \$626,970 | \$547,720 | \$4,488,450 |
| Any Black Bass | \$614,920 | \$997,680 | \$310,620 | \$325,210 | - | \$572,920 | \$454,560 | \$493,310 | \$330,850 | \$4,227,310 |
| Largemouth Bass | \$3,260 | \$4,090 | \$10,990 | \$44,350 | - | \$8,630 | \$23,710 | \$11,520 | \$16,330 | \$0 |
| Smallmouth Bass | \$94,620 | \$183,790 | \$146,010 | \$144,740 | - | \$172,020 | \$118,080 | \$122,140 | \$200,540 | \$261,140 |
| Spotted Bass | \$0 | \$1,340 | \$2,000 | \$0 | - | \$0 | \$0 | \$0 | \$0 | \$0 |

Largemouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-------|-------|-------|-------|------|--------|--------|-------|-------|--------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 0.67 | 2.53 | 1.47 | 3.14 | - | 3.07 | 0.7 | 4.53 | 3.29 | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | 77 | 79 | 76 | 79 | - | 75 | 84.0 | 80 | 81 | - |
| RSD (preferred) | 33 | 30 | 29 | 44 | - | 35 | 39.0 | 38 | 40 | - |
| CPUE (total) | 27.7 | 26.9 | 26.4 | 31.4 | - | 35.1 | 19.3 | 32.9 | 37.3 | - |
| CPUE ≥ Stock | 27.0 | 24.4 | 24.9 | 28.3 | - | 32.0 | 18.6 | 28.4 | 34.0 | - |
| CPUE ≥ MLL (14-inches) | 13.6 | 11.6 | 11.1 | 15.9 | - | 15.6 | 10.8 | 15.3 | 18.4 | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 83.5 | 84.1 | 82.5 | 86.2 | - | 83.1 | 84.0 | 81.0 | 82.5 | - |
| Quality | 85.9 | 83.1 | 82.3 | 85.6 | - | 85.3 | 82.6 | 80.2 | 80.8 | - |
| Preferred | 84.9 | 84.5 | 83.6 | 83.4 | - | 83.1 | 82.7 | 81.6 | 81.5 | - |
| Memorable | 86.9 | 87.1 | 93.6 | 80.1 | - | 90.0 | 97.1 | 77.3 | 92.7 | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0.29 | 0.10 | 0.00 | 0.38 | - | 0.90 | 0.38 | 0.41 | 0.64 | 0.46 |
| Harvest Rate (intended) | 0.00 | 0.00 | 0.00 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| % Released | 93.9% | 97.1% | 96.9% | 89.3% | - | 100.0% | 99.3% | 99.4% | 94.9% | 100.0% |
| Mean Weight | 1.70 | 3.07 | 2.05 | 1.80 | - | - | 190.0% | 2.20 | 2.31 | 0.00 |

Smallmouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 0.27 | 0.53 | 0.00 | 0.57 | - | 1.30 | 0.13 | 3.47 | 2.47 | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | 44 | 67 | 80 | 78 | - | 60 | 70 | 56 | 62 | - |
| RSD (preferred) | 19 | 36 | 52 | 52 | - | 35 | 29 | 27 | 34 | - |
| CPUE (preferred) | 0.3 | 2.4 | 1.2 | 3.0 | - | 3.2 | 1.7 | 4.1 | 3.5 | - |
| CPUE (memorable) | 0.1 | 0.8 | 0.5 | 1.0 | - | 2.7 | 0.3 | 1.5 | 1.2 | - |
| CPUE (trophy) | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.1 | 0.1 | 0.0 | - |
| CPUE (total) | 2.4 | 9.3 | 3.3 | 8.3 | - | 18.1 | 7.6 | 24.9 | 16.4 | - |
| CPUE ≥ Stock | 2.1 | 8.8 | 3.3 | 7.7 | - | 16.8 | 7.5 | 21.4 | 13.9 | - |
| CPUE ≥ Preferred | 0.4 | 3.2 | 1.7 | 4.0 | - | 5.9 | 2.1 | 5.7 | 4.7 | - |
| CPUE ≥ MLL (18-inches) | 0.0 | 0.3 | 0.0 | 0.6 | - | 0.5 | 0.1 | 0.5 | 0.5 | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | 3.3 | - | - | - | - | - |
| Length Age-3 | - | - | - | - | 11.6 | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 77.5 | 82.1 | 87.6 | 85.0 | 80.0 | 81.6 | 82.4 | 86.6 | 83.7 | 81.0 |
| Quality | 86.0 | 79.5 | 83.1 | 81.2 | 81.4 | 82.3 | 79.1 | 77.6 | 79.0 | 78.8 |
| Preferred | 80.0 | 78.8 | 83.0 | 80.1 | 82.2 | 78.4 | 78.4 | 72.8 | 77.6 | 79.7 |
| Memorable | 73.8 | 71.5 | 81.9 | 76.7 | 82.1 | 75.4 | 76.5 | 71.2 | 73.3 | 78.7 |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | 49.0% | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0.44 | 0.72 | 0.88 | 0.39 | - | 0.66 | 0.39 | 0.58 | 0.74 | 0.58 |
| Harvest Rate (intended) | 0.01 | 0.02 | 0.09 | 0.00 | - | 0.00 | 0.01 | 0.00 | 0.01 | 0.01 |
| % Released | 95.4% | 96.7% | 95.8% | 99.4% | - | 99.1% | 98.7% | 100.0% | 99.1% | 97.6% |
| Mean Weight | 2.70 | 2.79 | 2.45 | 1.68 | - | 2.86 | 4.02 | - | 1.80 | 2.97 |

Spotted Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-------|-------|-------|-------|------|-------|-------|-------|-------|--------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 3.47 | 2.67 | 0.93 | 2.00 | - | 5.20 | 0.80 | 0.67 | 0.71 | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | 35 | 29 | 37 | 54 | - | 27 | 41 | 43 | 41 | - |
| RSD (preferred) | 3 | 2 | - | 9 | - | 2 | 6 | 3 | 1 | - |
| CPUE (total) | 18.8 | 31.6 | 10.9 | 25.1 | - | 27.7 | 7.6 | 20.4 | 11.5 | - |
| CPUE ≥ Stock | 15.3 | 28.9 | 10.0 | 23.1 | - | 22.5 | 6.8 | 19.7 | 10.8 | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 92.9 | 92.4 | 91.1 | 93.6 | - | 88.9 | 90.8 | 88.3 | 87.6 | - |
| Quality | 92.0 | 86.6 | 89.6 | 89.0 | - | 86.9 | 86.1 | 82.3 | 82.7 | - |
| Preferred | 84.1 | 91.2 | - | 90.6 | - | 82.0 | 89.2 | 79.2 | 91.6 | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | 0.38 | 0.43 | 2.00 | - | 0.91 | - | - | - | - |
| Harvest Rate (intended) | - | 0.28 | 0.00 | 2.00 | - | 0.45 | - | - | - | - |
| % Released | 94.9% | 90.6% | 88.0% | 95.2% | - | 87.0% | 91.1% | 98.8% | 91.8% | 100.0% |
| Mean Weight | 0.75 | 0.82 | 0.75 | 1.16 | - | 1.05 | 0.84 | 1.10 | 1.55 | - |

Black Crappie

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|----------|----------|----------|----------|---------|----------|----------|----------|----------|----------|
| Recruitment (trap netting) | | | | | | | | | | |
| Substock CPUE | 2.87 | 0.67 | 0.16 | - | - | - | - | - | - | - |
| Density (trap netting) | | | | | | | | | | |
| PSD | 58 | 74 | 84 | - | - | - | - | - | - | - |
| RSD (preferred) | 29 | 32 | 58 | - | - | - | - | - | - | - |
| CPUE (total) | 5.3 | 1.7 | 1.3 | - | - | - | - | - | - | - |
| CPUE ≥ Stock | 2.4 | 1.0 | 1.1 | - | - | - | - | - | - | - |
| CPUE ≥ MLL (10-inches) | 0.7 | 0.3 | 0.6 | - | - | - | - | - | - | - |
| Growth (trap netting) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (trap netting or ele) | | | | | | | | | | |
| Stock | 89.9 | 95.2 | 91.8 | - | - | - | - | - | 84.0 | - |
| Quality | 88.4 | 91.6 | 95.0 | - | - | - | - | - | 82.1 | - |
| Preferred | 88.1 | 92.7 | 92.4 | - | - | - | - | - | 78.5 | - |
| Memorable | 88.5 | 86.2 | 90.5 | - | - | - | - | - | - | - |
| Mortality (trap netting) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | 109,572 | 103,559 | 110,806 | 132,453 | 128,226 | 102,039 | 118,247 | 155,114 | 102,311 | 107,306 |
| #/Acre | 3.2 | 3.0 | 3.2 | 3.9 | 3.7 | 3.0 | 3.5 | 4.5 | 3.0 | 3.1 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 20,986 | 23,948 | 20,226 | 22,261 | - | 21,921 | 14,175 | 18,908 | 14,499 | 28,606 |
| Angler Hours/Acre | 0.6 | 0.7 | 0.6 | 0.7 | - | 0.6 | 0.4 | 0.6 | 0.4 | 0.8 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 0.83 | 0.92 | 0.44 | 0.71 | - | 1.02 | 0.35 | 0.43 | 0.81 | 0.47 |
| Harvest Rate (any crappie) | 0.45 | 0.36 | 0.16 | 0.24 | - | 0.51 | 0.28 | 0.31 | 0.57 | 0.23 |
| % Released (black crappie) | 53.4% | 61.5% | 39.9% | 72.1% | - | 27.3% | 23.4% | 31.1% | 11.3% | 46.5% |
| Mean Weight (black crappie) | 0.74 | 0.83 | 0.76 | 0.87 | - | 0.95 | 0.85 | 0.64 | 0.89 | 0.83 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | \$46,790 | \$69,870 | \$29,200 | \$43,230 | - | \$52,380 | \$40,290 | \$36,200 | \$38,920 | \$17,270 |

Striped Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------------------|-----------|-----------|-----------|----------|---------|-----------|-----------|-----------|-----------|----------|
| Recruitment (gill netting) (w alleye nets) | | | | | | | | | | |
| Substock CPUE | 0.00 | 0.11 | 0.00 | 0.04 | 0.04 | 0.00 | 0.19 | 0.00 | 0.00 | - |
| Density (gill netting) (w alleye nets) | | | | | | | | | | |
| PSD | 58 | 59 | 48 | 77 | 85 | 46 | 47 | 49 | 56 | - |
| RSD (preferred) | 2 | 3 | 2 | 10 | 5 | 8 | 6 | 2 | 13 | - |
| CPUE (total) | 1.2 | 1.3 | 2.2 | 1.2 | 0.9 | 0.6 | 1.8 | 2.1 | 0.9 | - |
| CPUE ≥ Stock | 1.2 | 1.2 | 2.2 | 1.2 | 0.8 | 0.6 | 1.6 | 2.1 | 0.9 | - |
| CPUE ≥ 15-inches | 1.1 | 1.1 | 2.0 | 1.2 | 0.8 | 0.6 | 1.6 | 2.1 | 0.9 | - |
| Growth (gill netting) (w alleye nets) | | | | | | | | | | |
| Length Age-2 | 18.3 | 16.3 | 17.3 | - | 18.0 | - | 17.6 | - | - | - |
| Length Age-3 | 22.8 | 22.5 | 22.0 | - | 23.1 | - | 23.1 | - | - | - |
| Condition (gill netting) (w alleye nets) | | | | | | | | | | |
| Stock | 89.5 | 97.2 | 92.9 | 99.4 | 92.7 | 92.8 | 93.1 | 94.1 | 96.2 | - |
| Quality | 93.1 | 88.1 | 90.9 | 92.6 | 88.3 | 87.6 | 89.2 | 91.8 | 87.7 | - |
| Preferred | 94.1 | - | 84.3 | 84.2 | 72.4 | - | 81.9 | 82.5 | 78.5 | - |
| Memorable | - | - | - | - | - | - | - | - | - | - |
| Stocking | | | | | | | | | | |
| # | 103,997 | 108,103 | 106,676 | 103,201 | 119,949 | 106,586 | 104,228 | 109,330 | 107,415 | 90,930 |
| #/Acre | 3.0 | 3.2 | 3.1 | 3.0 | 3.5 | 3.1 | 3.0 | 3.2 | 3.1 | 2.7 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | 41,428 | 33,232 | 62,133 | 26,507 | - | 34,918 | 19,258 | 65,708 | 35,324 | 40,038 |
| Angler Hours/Acre | 1.2 | 1.0 | 1.8 | 0.8 | - | 1.0 | 0.6 | 1.9 | 1.0 | 1.2 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0.28 | 0.26 | 0.08 | 0.18 | - | 0.27 | 0.2 | 0.22 | 0.39 | 0.00 |
| Harvest Rate (intended) | 0.04 | 0.04 | 0.02 | 0.00 | - | 0.12 | 0.07 | 0.06 | 0.10 | 0.00 |
| % Released | 91.0% | 75.7% | 74.0% | 98.3% | - | 63.3% | 68.4% | 69.5% | 76.1% | 70.2% |
| Mean Weight | 7.79 | 10.23 | 12.30 | 9.05 | - | 10.84 | 10.45 | 12.60 | 10.84 | 19.31 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Striped Bass | \$134,910 | \$293,220 | \$261,760 | \$67,250 | - | \$292,310 | \$100,540 | \$551,890 | \$423,490 | \$18,246 |

Walleye

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|-----------|----------|-----------|---------|-----------|----------|----------|----------|----------|
| Recruitment (gill netting) | | | | | | | | | | |
| Substock CPUE | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Density (gill netting) | | | | | | | | | | |
| PSD | 96 | 93 | 95 | 89 | 99 | 93 | 98 | 98 | 97 | 97 |
| RSD (preferred) | 13 | 13 | 25 | 27 | 17 | 22 | 19 | 35 | 32 | 33 |
| CPUE (total) | 2.8 | 5.8 | 6.2 | 6.2 | 6.5 | 8.2 | 5.4 | 6.3 | 8.1 | 7.2 |
| CPUE ≥ Stock | 2.8 | 5.8 | 6.2 | 6.2 | 6.5 | 8.2 | 5.4 | 6.3 | 8.1 | 7.2 |
| CPUE ≥ MLL (15-inches) | 2.6 | 5.4 | 5.9 | 5.5 | 6.5 | 7.6 | 5.2 | 6.2 | 7.9 | 6.9 |
| Growth (gill netting) | | | | | | | | | | |
| Length Age-1 | 11.7 | 12.1 | 12.8 | - | - | - | 11.6 | - | - | - |
| Length Age-3 | 18.4 | 18.3 | 18.9 | - | 18.9 | - | 18.0 | - | 17.1 | - |
| Condition (gill netting) | | | | | | | | | | |
| Stock | 88.3 | 93.1 | 91.6 | 92.5 | 88.9 | 91.1 | 93.1 | 91.8 | 95.2 | 88.4 |
| Quality | 85.8 | 89.3 | 89.3 | 90.6 | 89.3 | 88.5 | 89.2 | 91.1 | 91.7 | 87.9 |
| Preferred | 84.4 | 83.7 | 88.2 | 88.1 | 88.8 | 86.5 | 88.5 | 91.0 | 90.0 | 86.4 |
| Memorable | - | - | - | 87.0 | - | 82.4 | 80.9 | - | 85.9 | 80.7 |
| Mortality (gill netting) | | | | | | | | | | |
| Total Mortality | - | 32.0% | 40.0% | - | - | - | 45.0% | - | - | - |
| Stocking | | | | | | | | | | |
| # | 197,472 | 187,589 | 170,066 | 194,584 | 284,146 | 194,291 | 240,267 | 212,123 | 198,837 | 250,369 |
| #/Acre | 5.8 | 5.5 | 5.0 | 5.7 | 8.3 | 5.7 | 7.0 | 6.2 | 5.8 | 7.3 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | 45,729 | 40,665 | 20,597 | 43,013 | - | 30,013 | 21,801 | 11,240 | 12,944 | 20,740 |
| Angler Hours/Acre | 1.3 | 1.2 | 0.6 | 1.3 | - | 0.9 | 0.6 | 0.3 | 0.4 | 0.6 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0.06 | 0.08 | 0.08 | 0.03 | - | 0.12 | 0.11 | 0.21 | 0.33 | 24.00 |
| Harvest Rate (intended) | 0.05 | 0.07 | 0.05 | 0.02 | - | 0.10 | 0.11 | 0.11 | 0.30 | 0.19 |
| % Released | 13.9% | 18.5% | 43.3% | 57.1% | - | 18.5% | 11.1% | 49.7% | 16.0% | 17.3% |
| Mean Weight | 2.22 | 2.29 | 3.45 | 2.89 | - | 2.74 | 3.18 | 1.75 | 2.86 | 1.88 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Walleye | \$176,350 | \$200,580 | \$31,420 | \$102,450 | - | \$105,530 | \$37,850 | \$34,360 | \$16,470 | \$33,140 |

Sunfish

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|----------|----------|----------|----------|------|----------|----------|----------|----------|----------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all sunfish) | 21,485 | 25,006 | 36,133 | 13,787 | - | 17,128 | 16,305 | 7,400 | 20,501 | 18,555 |
| Angler Hours/Acre | 0.6 | 0.7 | 1.1 | 0.4 | - | 0.5 | 0.5 | 0.2 | 0.6 | 0.5 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any sunfish) | 4.01 | 2.24 | 2.26 | 1.03 | - | 2.55 | 3.75 | 2.42 | 4.07 | 2.93 |
| Harvest Rate (any sunfish) | 1.47 | 1.17 | 1.30 | 0.32 | - | 1.27 | 2.10 | 1.63 | 2.08 | 2.24 |
| % Released (bluegill) | 68.2% | 61.8% | 55.1% | 86.9% | - | 37.2% | - | 48.3% | 60.3% | 34.0% |
| Mean Weight (bluegill) | 0.27 | 0.25 | 0.34 | 0.32 | - | 0.39 | - | 0.31 | 0.37 | 0.48 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Sunfish | \$54,890 | \$70,350 | \$54,520 | \$24,300 | - | \$35,910 | \$38,160 | \$17,190 | \$44,810 | \$24,280 |

Catfish

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|---------|-------|-------|---------|------|---------|-------|-------|-------|-------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all catfish) | 2,488 | 345 | 3,895 | 3,801 | - | 1,314 | 2,840 | 677 | 1,590 | 2,504 |
| Angler Hours/Acre | 0.1 | 0.0 | 0.1 | 0.1 | - | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any catfish) | 0.11 | 0.00 | 0.00 | 0.26 | - | 0.25 | 0.74 | 0.00 | 0.05 | 0.00 |
| Harvest Rate (any catfish) | 0.11 | 0.00 | 0.00 | 0.26 | - | 0.25 | 0.74 | 0.00 | 0.05 | 0.00 |
| % Released (channel) | 70.9% | 65.0% | 65.4% | 46.5% | - | 84.2% | 41% | 46.8% | 81.6% | 64.7% |
| Mean Weight (channel) | 1.34 | 1.44 | 1.27 | 2.44 | - | 3.55 | 3.48 | 2.90 | 4.30 | 2.44 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Catfish | \$3,590 | - | - | \$2,880 | - | \$1,550 | - | - | - | - |

Shad

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Density (Summer Shad Gill Netting) (geometric means) | | | | | | | | | | |
| Alewife CPUE | 1.6 | 1.6 | 1.2 | - | - | 0.5 | 0.6 | 0.1 | - | - |
| Gizzard CPUE | 1.7 | 1.3 | 1.2 | - | - | 1.7 | 0.9 | 0.8 | - | - |
| Threadfin CPUE | 6.2 | 3.2 | 1.3 | - | - | 0.2 | 0.5 | 1.2 | - | - |

Habitat Enhancement

| Type of Work | Details | Quantity | |
|--------------|---------|----------|-----------|
| | | New | Renovated |
| none | | | |

Water Quality Monitoring

| Parameter | Sampling Period | Water Quality |
|------------------|-----------------|---------------|
| Temperature | July - August | Normal |
| Dissolved Oxygen | July - August | Normal |
| PH | July - August | Normal |
| Conductivity | July - August | Normal |

South Holston Reservoir

Description

| | |
|-------------------------------------------------------------|-----------------------------------------------------|
| Surface Area: 7,580 acres | Shoreline Distance: 182 miles |
| Counties: Sullivan, Washington (VA) | Drainage Area: 703 square miles |
| Full Pool Elevation: 1,729 feet above mean sea level | Mean Annual Fluctuation: 39 feet |
| Maximum Depth: 245 feet | Thermocline Depth: 13 feet |
| Mean Chlorophyll (Forebay): 4.2 parts per million | Shoreline Development: 14% |
| Trophic Status (Forebay): Mesotrophic | Trophic Index, Carlson (1977): 44.7 |
| Hydraulic Retention Time: 340 days | Reservoir Age: 66 years (dam completed 1950) |
| Total Fishing Effort: No Creel in 2016 | Total Value by Anglers: No Creel in 2016 |

Summary:

Electrofishing

Electrofishing was conducted on South Holston Reservoir in April 2016. The total number of largemouth bass collected was above average, compared to the last 10 years. A PSD value of 78 would indicate that the size structure is slightly dominated by larger fish. There were also good numbers of largemouth collected under 10-inches, which should keep the quality of this fishery stable.

The total number of smallmouth bass collected was the highest number collected in the past 10 years, at 43.2 fish/hour. The number of smallmouth over the MLL of 15-inches was also slightly above normal at 10.4 fish/hour. There were also good numbers of smallmouth bass collected from 7 to 14 inches. These fish should recruit into larger size classes and result in more keeper size fish for anglers to catch.

We did not collect any spotted bass in our electrofishing sample this year. Spotted bass rarely reach quality size in east Tennessee reservoirs and they compete with other more desirable black bass species. Spotted bass have also been shown to hybridize and prey on other black bass species.

The number of black crappie collected in 2016 was one largest samples collected on the reservoir at 27.2 fish/hour. There was also a large number of crappie collected over the MLL of 10-inches.

Gill Netting

There was no gill netting conducted on South Holston Reservoir in 2016.

Trap Netting

There was no trap netting conducted on South Holston Reservoir in 2016

Habitat Enhancement

There was no habitat enhancement on South Holston Reservoir in 2016.

Water Quality

Water quality samples were collected at two sites on South Holston Reservoir during July, August, and September 2016. The results from these samples were normal for South Holston Reservoir.

Lakewide Angling Summary**Total Effort and Expenditures**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Angling Pressure | | | | | | | | | | |
| Angler Hours | 121,926 | no survey | no survey | no survey | no survey | 169,822 | no survey | no survey | 164,139 | no survey |
| Angler Hours Per Acre | 19.2 | no survey | no survey | no survey | no survey | 26.7 | no survey | no survey | 21.7 | no survey |
| Angler Trips | 18,866 | no survey | no survey | no survey | no survey | 26,499 | no survey | no survey | 26,676 | no survey |
| Value of Fishery (angler expenditures creel) | | | | | | | | | | |
| All Species | \$216,640 | no survey | no survey | no survey | no survey | \$683,760 | no survey | no survey | \$507,250 | no survey |

Black Bass, South Holston Reservoir**Black Bass**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|---------------------------------------------|--------|----------------------------|----------------------------|--------|---------|---------|----------------------------|----------------------------|---------|----------------------------|---------|
| Angling Pressure (creel survey data) | | | | | | | | | | | |
| All Black Bass (hrs) | 72,371 | N o | N o | 80,172 | 129,756 | 115,096 | N o | N o | 121,227 | N o | 103,724 |
| (hrs/acre) | 9.5 | | | 10.6 | 17.1 | 15.1 | | | 16.0 | | 13.7 |
| Any Black Bass (hrs) | 64,527 | S u r v e y | S u r v e y | 76,226 | 126,178 | 106,061 | S u r v e y | S u r v e y | 112,882 | S u r v e y | 97,175 |
| (hrs/acre) | 8.5 | | | 10.1 | 16.6 | 14.0 | | | 14.9 | | 12.8 |
| Largemouth Bass (hrs) | 280 | | | 0 | 1,176 | 192 | | | 1,346 | | 599 |
| (hrs/acre) | 0.0 | | | 0.0 | 0.2 | 0.0 | | | 0.2 | | 0.1 |
| Smallmouth Bass (hrs) | 7,564 | | | 3,946 | 2,402 | 8,843 | | | 6,316 | | 5,814 |
| (hrs/acre) | 1.0 | | | 0.5 | 0.3 | 1.2 | | | 0.8 | | 0.8 |
| Spotted Bass (hrs) | 0 | | | 0 | 0 | 0 | | | 683 | | 137 |
| (hrs/acre) | 0.0 | | | 0.0 | 0.0 | 0.0 | | | 0.1 | | 0.0 |

Tournaments (BITE program & creel survey data)

| | | | | | | | | | | | |
|--------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| # Tournaments (BITE) | none reported | none reported | none reported | none reported | none reported | none reported | none reported | none reported | none reported | none reported | none reported |
| Pounds/Angler Day (BITE) | none reported | none reported | none reported | none reported | none reported | none reported | none reported | none reported | none reported | none reported | none reported |
| Bass/Angler Day (BITE) | none reported | none reported | none reported | none reported | none reported | none reported | none reported | none reported | none reported | none reported | none reported |

Value of Fishery (creel survey data - trip expenditures)

| | | | | | | | | | | | |
|-----------------|-----------|--------------|--------------|-----------|-----------|-----------|--------------|--------------|-----------|--------------|-----------|
| All Black Bass | \$144,320 | No Survey | No Survey | \$390,100 | \$655,920 | \$492,350 | No Survey | No Survey | \$439,120 | No Survey | \$424,362 |
| Any Black Bass | \$136,890 | | | \$374,510 | \$616,810 | \$455,770 | | | \$404,160 | | \$397,628 |
| Largemouth Bass | \$1,270 | | | \$0 | \$21,740 | \$1,190 | | | \$12,080 | | \$7,256 |
| Smallmouth Bass | \$6,160 | | | \$15,590 | \$17,370 | \$35,390 | | | \$21,550 | | \$19,212 |
| Spotted Bass | \$0 | | | \$0 | \$0 | \$0 | | | \$1,330 | | \$266 |

Largemouth Bass, South Holston Reservoir**Largemouth Bass**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|----------------------------------------------------|-------------------------------------|--------|--------|------|------|------|--------|--------|-----------|--------|-------|
| Recruitment (electrofishing data) | | | | | | | | | | | |
| Age-1 CPUE | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A |
| Substock CPUE | 0.4 | 2.4 | 1.5 | 5.2 | 3.6 | 2.0 | 1.2 | 1.8 | no survey | 2.8 | 2.3 |
| Density (electrofishing data - CPUE = # fish/hour) | | | | | | | | | | | |
| PSD | 82% | 83% | 79% | 73% | 81% | 81% | 81% | 85% | no survey | 78% | 80% |
| RSD - Preferred | 59% | 53% | 55% | 46% | 48% | 44% | 43% | 58% | no survey | 57% | 51% |
| CPUE | 19.2 | 35.8 | 29.2 | 37.6 | 27.1 | 18.2 | 23.2 | 23.8 | no survey | 29.6 | 27.1 |
| CPUE ≥ Stock | 18.8 | 33.4 | 27.7 | 32.4 | 23.5 | 16.2 | 22.0 | 22.0 | no survey | 26.8 | 24.8 |
| CPUE ≥ MSL | N o M i n i m u m S i z e L i m i t | | | | | | | | | | |
| Growth (electrofishing data) | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A |
| Mean TL at Age-3 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A |
| Relative Weight (electrofishing data) | | | | | | | | | | | |
| Stock - Quality | 96.3 | 92.8 | 88.7 | 88.4 | 84.2 | 86.3 | 87.1 | 86.7 | no survey | 83.0 | 88.2 |
| Quality - Preferred | 99.2 | 97.3 | 94.3 | 95.0 | 94.3 | 93.1 | 91.7 | 91.2 | no survey | 88.7 | 93.9 |
| Preferred - Memorable | 99.7 | 101.2 | 97.7 | 97.7 | 93.3 | 92.6 | 93.7 | 94.6 | no survey | 93.3 | 96.0 |
| Memorable - Trophy | 93.7 | 97.4 | 93.2 | 91.5 | 89.3 | 91.2 | 96.1 | 92.4 | no survey | 94.9 | 93.3 |
| Trophy | none | none | none | none | none | none | none | none | no survey | none | none |
| Mortality (electrofishing data) | | | | | | | | | | | |
| Total Mortality | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Fishing Success (creel survey data) | | | | | | | | | | | |
| Catch Rate | 0.05 | No | No | 0.15 | 0.15 | 0.15 | No | No | 0.26 | No | 0.15 |
| Harvest Rate | 0.01 | | | 0.00 | 0.00 | 0.00 | | | 0.01 | | 0.00 |
| Percent Harvested | 11.3% | Survey | Survey | 2.7% | 2.9% | 3.1% | Survey | Survey | 2.0% | Survey | 4.4% |
| Mean Weight (pounds) | 2.11 | | | 5.66 | 1.61 | 3.8 | | | 2.38 | | 3.112 |

Smallmouth Bass, South Holston Reservoir

| Smallmouth Bass | | | | | | | | | | | |
|-----------------------------------------------------------|-------|--------|--------|------|-------|-------|--------|--------|-----------|--------|------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
| Recruitment (electrofishing data) | | | | | | | | | | | |
| Age-1 CPUE | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A |
| Substock CPUE | 1.0 | 1.8 | 1.4 | 4.8 | 1.6 | 2.2 | 1.0 | 3.2 | no survey | 6.0 | 2.6 |
| Density (electrofishing data - CPUE = # fish/hour) | | | | | | | | | | | |
| PSD | 69% | 80% | 87% | 77% | 82% | 56% | 82% | 70% | no survey | 58% | 73% |
| RSD - Preferred | 46% | 47% | 57% | 64% | 63% | 33% | 65% | 49% | no survey | 39% | 51% |
| CPUE | 21.6 | 27.2 | 21.4 | 26.8 | 37.8 | 16.20 | 25.8 | 28.8 | no survey | 43.2 | 27.7 |
| CPUE ≥ Stock | 20.6 | 25.4 | 20.0 | 22.0 | 36.3 | 14.00 | 24.8 | 25.6 | no survey | 37.2 | 25.1 |
| CPUE ≥ MSL* | N/A | 5.6 | 1.4 | 11.0 | 17.7 | 3.2 | 10.2 | 8.6 | no survey | 10.4 | 8.5 |
| Growth (electrofishing data) | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A |
| Mean TL at Age-3 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A |
| Relative Weight (electrofishing data) | | | | | | | | | | | |
| Stock - Quality | 88.4 | 93.8 | 92.6 | 92.2 | 88.6 | 81.9 | 86.8 | 81.2 | no survey | 84.3 | 87.8 |
| Quality - Preferred | 89.6 | 98.4 | 92.4 | 90.1 | 94.4 | 92.0 | 89.2 | 86.0 | no survey | 86.0 | 90.9 |
| Preferred - Memorable | 97.1 | 94.4 | 91.8 | 92.3 | 96.2 | 92.8 | 88.6 | 84.4 | no survey | 82.7 | 91.2 |
| Memorable - Trophy | 94.5 | 90.7 | 90.0 | 86.0 | 94.4 | 89.1 | 89.7 | 80.4 | no survey | 85.2 | 88.9 |
| Trophy | none | none | none | none | none | none | none | none | no survey | none | none |
| Mortality (electrofishing data) | | | | | | | | | | | |
| Total Mortality | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Fishing Success (creel survey data) | | | | | | | | | | | |
| Catch Rate | 0.16 | No | No | 0.40 | 0.33 | 0.43 | No | No | 0.38 | No | 0.34 |
| Harvest Rate | 0.02 | | | 0.03 | 0.04 | 0.02 | | | 0.01 | | 0.02 |
| Percent Harvested | 14.2% | Survey | Survey | 8.0% | 10.5% | 4.6% | Survey | Survey | 2.9% | Survey | 8.0% |
| Mean Weight (pounds) | 2.44 | | | 3.64 | 3.54 | 3.32 | | | 3.98 | | 3.38 |

Spotted Bass, South Holston Reservoir

| Spotted Bass | | | | | | | | | | | |
|----------------------------------------------------|-------------------------------------|------|------|------|------|------|------|-------|-----------|------|--------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
| Recruitment (electrofishing data) | | | | | | | | | | | |
| Age-1 CPUE | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A |
| Substock CPUE | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | no survey | 0.0 | 0.0 |
| Density (electrofishing data - CPUE = # fish/hour) | | | | | | | | | | | |
| PSD | none | none | none | none | none | none | none | none | no survey | none | none |
| RSD - Preferred | none | none | none | none | none | none | none | none | no survey | none | none |
| CPUE | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | no survey | 0.0 | 0.0 |
| CPUE ≥ Stock | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | no survey | 0.0 | 0.0 |
| CPUE ≥ MSL | N o M i n i m u m S i z e L i m i t | | | | | | | | | | |
| Growth (electrofishing data) | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A |
| Mean TL at Age-3 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A |
| Relative Weight (electrofishing data) | | | | | | | | | | | |
| Stock - Quality | none | none | none | none | none | none | 97.3 | 118.2 | no survey | none | 107.75 |
| Quality - Preferred | none | none | none | none | none | none | none | none | no survey | none | none |
| Preferred - Memorable | none | none | none | none | none | none | none | none | no survey | none | none |
| Memorable - Trophy | none | none | none | none | none | none | none | none | no survey | none | none |
| Trophy | none | none | none | none | none | none | none | none | no survey | none | none |
| Mortality (electrofishing data) | | | | | | | | | | | |
| Total Mortality | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Fishing Success (creel survey data) | | | | | | | | | | | |
| Catch Rate | none | none | none | none | none | none | none | none | 0.01 | none | 0.01 |
| Harvest Rate | none | none | none | none | none | none | none | none | 0.01 | none | 0.01 |
| Percent Harvested | none | none | none | none | none | none | none | none | 0.413 | none | 0.41 |
| Mean Weight (pounds) | none | none | none | none | none | none | none | none | 1.73 | none | none |

Black Crappie, South Holston Reservoir

| Black Crappie | | | | | | | | | | | |
|----------------------------------------------------------|----------|------|------|---------|---------|---------|------|------|-----------|------|---------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
| Recruitment (electrofishing data) - CPUE = # fish/ hour) | | | | | | | | | | | |
| Age-0 CPUE | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A |
| Substock CPUE | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.00 | 0.4 | 0.2 | no survey | 0.0 | 0.1 |
| Density (electrofishing data) - CPUE = # fish/ hour) | | | | | | | | | | | |
| PSD | 98% | 99% | 95% | 100% | 88% | 98% | 96% | 76% | no survey | 99% | 94% |
| RSD - Preferred | 74% | 86% | 79% | 89% | 44% | 71% | 80% | 49% | no survey | 80% | 72% |
| CPUE | 18.2 | 34.6 | 17.5 | 11.0 | 22.6 | 11.6 | 21.0 | 29.4 | no survey | 27.2 | 21.4 |
| CPUE ≥ Stock | 18.2 | 34.6 | 17.5 | 10.6 | 22.6 | 11.6 | 20.6 | 29.2 | no survey | 27.2 | 21.3 |
| CPUE ≥ MSL (10") | 11.0 | 26.6 | 13.3 | 9.0 | 11.2 | 6.6 | 15.0 | 12.8 | no survey | 19.8 | 13.9 |
| Growth (electrofishing data) | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A |
| Mean TL at Age-3 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | 254 |
| Relative Weight (electrofishing data) | | | | | | | | | | | |
| Stock - Quality | 96.3 | 95.8 | 99.7 | none | 103.2 | 90.7 | 93.1 | 95.3 | no survey | 99.8 | 96.8 |
| Quality - Preferred | 99.2 | 96.3 | 99.4 | 105.3 | 103.6 | 96.6 | 96.4 | 95.5 | no survey | 93.9 | 98.5 |
| Preferred - Memorable | 97.2 | 95.8 | 91.0 | 96.2 | 96.9 | 98.4 | 92.1 | 92.6 | no survey | 92.8 | 94.8 |
| Memorable - Trophy | 93.7 | 91.3 | 87.4 | 91.4 | 94.2 | 90.6 | 90.3 | 88.9 | no survey | 91.3 | 91.0 |
| Trophy | none | none | none | none | none | none | none | none | no survey | none | none |
| Mortality (electrofishing data) | | | | | | | | | | | |
| Total Mortality | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A |
| Stocking | | | | | | | | | | | |
| # per Acre | 0.0 | 0.0 | 0.0 | 0.0 | 9.7 | 0.0 | 8.3 | 9.5 | 8.0 | 6.6 | 4.2 |
| Angling Pressure (creel survey data - any crappie) | | | | | | | | | | | |
| Angler Hours | 7,564 | N | N | 6,003 | 3,746 | 1,743 | N | N | 8,437 | N | 5,499 |
| Angler Hours/Acre | 1.0 | | | 0.8 | 0.5 | 0.2 | | | 1.1 | | 0.2 |
| Fishing Success (creel survey data) | | | | | | | | | | | |
| Catch Rate | 0.13 | S | S | 0.77 | 1.24 | 2.44 | S | S | 1.41 | S | 1.20 |
| Harvest Rate | 0.09 | u | u | 0.46 | 0.80 | 1.84 | u | u | 0.70 | u | 0.78 |
| Percent Harvested | 62.2% | r | r | 72.4% | 77.9% | 46.5% | r | r | 65.5% | r | 64.9% |
| Mean Weight (pounds) | 0.89 | v | v | 1.22 | 1.06 | 0.83 | v | v | 1.39 | v | 1.078 |
| Value of Fishery (creel survey data - trip expenditures) | | | | | | | | | | | |
| Any Crappie | \$11,200 | | | \$9,580 | \$4,790 | \$3,830 | | | \$14,310 | | \$8,742 |

Walleye, South Holston Reservoir

| Walleye | | | | | | | | | | | |
|-----------------------------------------------------------------|----------------|-------|-------|----------------|----------------|----------------|-------|-----------|----------------|-----------|----------------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
| Recruitment (winter gill net data) | | | | | | | | | | | |
| Substock CPUE | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | no sample | 0.00 |
| Density (winter gill net data - CPUE = # fish/net night) | | | | | | | | | | | |
| PSD | 93% | 79% | 92% | 85% | 95% | 95% | 93% | 100% | 92% | no sample | 92% |
| RSD - Preferred | 59% | 45% | 22% | 27% | 22% | 43% | 60% | 54% | 45% | no sample | 42% |
| CPUE | 6.3 | 12.6 | 10.9 | 14.8 | 12.2 | 9.3 | 6.7 | 15.0 | 10.7 | no sample | 10.9 |
| CPUE ≥ Stock | 6.3 | 12.6 | 10.9 | 14.8 | 12.2 | 9.3 | 6.7 | 15.0 | 10.7 | no sample | 10.9 |
| CPUE ≥ MSL (18") | 4.86 | 8.08 | 5.00 | 9.50 | 7.16 | 7.0 | 5.0 | 11.30 | 7.0 | no sample | 7.2 |
| Growth (winter gill net data) | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | 415 | 450 | 434 | 435 | 434 | no sample | 452 | no sample | 436 | no sample | 437 |
| Mean TL at Age-3 (mm) | 537 | 524 | 525 | 516 | 515 | no sample | 518 | no sample | 548 | no sample | 526 |
| Relative Weight (winter gill net data) | | | | | | | | | | | |
| Stock - Quality | 99.7 | 103.4 | 104.0 | 90.7 | 92.9 | 99.4 | 98.6 | none | 97.2 | no sample | 98.2 |
| Quality - Preferred | 95.1 | 103.6 | 96.5 | 97.4 | 97.1 | 97.9 | 105.2 | 97.8 | 101.0 | no sample | 99.1 |
| Preferred - Memorable | 97.3 | 101.7 | 94.2 | 96.1 | 97.6 | 100.3 | 102.6 | 99.2 | 101.4 | no sample | 98.9 |
| Memorable - Trophy | 96.7 | none | 87.6 | 91.6 | none | none | 99.5 | 99.7 | 99.5 | no sample | 95.8 |
| Trophy | none | none | none | none | none | none | none | none | none | no sample | none |
| Mortality (winter gill net data) | | | | | | | | | | | |
| Total Mortality | N/A | N/A | 32% | N/A | N/A | N/A | N/A | N/A | N/A | no sample | 32% |
| Stocking* | | | | | | | | | | | |
| # per Acre | 5.1 | 5.4 | 3.3 | 5.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 |
| Angling Pressure (creel survey data - walleye data only) | | | | | | | | | | | |
| Angler Hours | 21,543 | N | N | 9,040 | 13,584 | 28,600 | N | N | 4,573 | N | 15,468 |
| Angler Hours/Acre | 2.84 | | | 1.19 | 1.79 | 3.77 | o | o | 0.60 | o | 0.51 |
| Fishing Success (creel survey data - walleye data only) | | | | | | | | | | | |
| Catch Rate | not calculated | S | S | not calculated | not calculated | not calculated | S | S | not calculated | S | not calculated |
| Harvest Rate | not calculated | u | u | not calculated | not calculated | not calculated | u | u | not calculated | u | not calculated |
| Percent Harvested | 59.0% | r | r | 73.0% | 87.8% | 80.0% | r | r | 93.1% | r | 78.6% |
| Mean Weight (pounds) | 3.35 | v | v | 5.27 | 4.30 | 4.24 | v | v | 6.08 | v | 4.65 |
| Value of Fishery (creel survey data - trip expenditures) | | | | | | | | | | | |
| Walleye Data Only | \$37,930 | | | \$30,550 | \$50,210 | \$107,070 | y | y | \$10,210 | y | \$47,194 |

Trout, South Holston Reservoir

| Trout | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|-----------------------------------------------------------------|------------|----------|--------|--------|----------|----------|----------|--------|--------|----------|--------|----------|
| Angling Pressure (creel survey data) | | | | | | | | | | | | |
| All Trout | (hrs) | 10,467 | N | N | 16,574 | 27,644 | 10,646 | N | N | 14,911 | N | 13,374 |
| | (hrs/acre) | 1.4 | O | O | 2.2 | 3.6 | 1.4 | O | O | 2.0 | O | 2.1 |
| Any Trout | (hrs) | 10,099 | | | 10,212 | 13,422 | 1,703 | | | 5,317 | | 8,151 |
| | (hrs/acre) | 1.3 | | | 1.3 | 1.8 | 0.2 | | | 0.7 | | 1.1 |
| Rainbow Trout | (hrs) | 368 | S | S | 1,672 | 3,968 | 673 | S | S | 0 | S | 1,336 |
| | (hrs/acre) | 0.0 | u | u | 0.2 | 0.5 | 0.1 | u | u | 0.0 | u | 0.2 |
| Brown Trout | (hrs) | 0 | r | r | 0 | 0 | 0 | r | r | 0 | r | 0 |
| | (hrs/acre) | 0.0 | v | v | 0.0 | 0.0 | 0.0 | v | v | 0.0 | v | 0.0 |
| Lake Trout | (hrs) | 0 | y | y | 4,690 | 10,254 | 8,270 | y | y | 9,594 | y | 6,562 |
| | (hrs/acre) | 0.0 | | | 0.1 | 0.1 | 1.1 | | | 1.3 | | 0.5 |
| Value of Fishery (creel survey data - trip expenditures) | | | | | | | | | | | | |
| All Trout | | \$13,520 | | | \$41,270 | \$73,710 | \$35,380 | | | \$22,340 | | \$37,244 |
| Any Trout | | \$12,740 | No | No | \$24,740 | \$26,080 | \$4,610 | No | No | \$12,130 | No | \$16,060 |
| Rainbow Trout | | \$780 | Survey | Survey | \$3,370 | \$17,090 | \$3,730 | Survey | Survey | \$0 | Survey | \$4,994 |
| Brown Trout | | \$0 | | | \$0 | \$0 | \$0 | | | \$0 | | \$0 |
| Lake Trout | | \$0 | | | \$13,160 | \$30,540 | \$27,040 | | | \$10,210 | | \$16,190 |

Lake Trout, South Holston Reservoir

| Lake Trout | | | | | | | | | | | |
|-------------------------------------|------|--------|--------|----------------|----------------|----------------|--------|--------|----------------|--------|----------------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
| Fishing Success (creel survey data) | | | | | | | | | | | |
| Catch Rate | none | No | No | not calculated | not calculated | not calculated | No | No | not calculated | No | not calculated |
| Harvest Rate | none | | | not calculated | not calculated | not calculated | | | not calculated | | not calculated |
| Percent Harvested | none | Survey | Survey | 67.5% | 61.1% | 37.9% | Survey | Survey | 60.3% | Survey | 56.7% |
| Mean Weight (pounds) | none | | | 3.66 | 4.46 | 4.09 | | | 5.43 | | 4.41 |

Sunfish, South Holston Reservoir

| Sunfish | | | | | | | | | | | | |
|----------------------------------------------------------|-------|------|------|---------|----------|---------|--------|--------|---------|--------|---------|------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean | |
| Angling Pressure (creel survey data - any sunfish) | | | | | | | | | | | | |
| Angler Hours | * 792 | | | 3,773 | 13,434 | 1,604 | N o | N o | 6,431 | N o | 5,207 | |
| Angler Hours/Acre | 0.10 | N | N | 0.50 | 1.77 | 0.20 | | | 0.80 | | 0.17 | |
| Fishing Success (creel survey data - bluegill only) | | | | | | | | | | | | |
| Catch Rate (bluegill) | 1.52 | S | S | 1.80 | 1.68 | 1.49 | | | S | | S | 1.58 |
| Harvest Rate (bluegill) | 0.35 | u | u | 0.02 | 0.18 | 0.34 | u | u | 0.00 | u | 0.18 | |
| % Harvested (bluegill) | 15.6% | r | r | 2.3% | 6.7% | 3.9% | r | r | 0.0% | r | 5.7% | |
| Mean Weight (bluegill) | 0.26 | v | v | 0.37 | 0.33 | none | v | v | none | v | 0.32 | |
| Value of Fishery (creel survey data - trip expenditures) | | | | | | | e y | e y | | e y | | |
| Any Sunfish | \$530 | y | y | \$4,220 | \$21,870 | \$3,730 | | | \$6,960 | | \$7,462 | |

* Bluegill only

Catfish, South Holston Reservoir

| Catfish | | | | | | | | | | | |
|-----------------------------------------------------------------|---------|------|------|---------|---------|---------|------|------|-------|------|---------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
| Angling Pressure (creel survey data - any catfish) | | | | | | | | | | | |
| Angler Hours | 3,106 | N | N | 468 | 890 | 131 | N | N | 252 | N | 969 |
| Angler Hours/Acre | 0.41 | - | o | 0.06 | 0.12 | 0.01 | o | o | 0.03 | o | 0.03 |
| Fishing Success (creel survey data) | | | | | | | | | | | |
| Catch Rate (channel cat) | 0.11 | S | S | 0.37 | 0.14 | 0.00 | S | S | 0.00 | S | 0.12 |
| Harvest Rate (channel cat) | 0.11 | u | u | 0.08 | 0.13 | 0.00 | u | u | 0.00 | u | 0.06 |
| % Harvested (channel cat) | 65.2% | r | r | 16.6% | 42.5% | 21.5% | r | r | 0.0% | r | 29.2% |
| Mean Weight (channel cat) | 2.93 | v | v | 3.14 | 3.09 | 4.19 | v | v | none | v | 3.3375 |
| Value of Fishery (creel survey data - trip expenditures) | | | | | | | | | | | |
| Any Catfish | \$2,960 | y | y | \$2,590 | \$2,160 | \$3,810 | y | y | \$370 | y | \$2,378 |

Shad, South Holston Reservoir

| Shad | | | | | | | | | | | |
|---------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
| Density (summer shad gill net data - geometric mean density) | | | | | | | | | | | |
| Gizzard Shad | No Sample | No Sample | No Sample | No Sample | No Sample | No Sample | No Sample | No Sample | No Sample | No Sample | No Sample |
| Threadfin Shad | No Sample | No Sample | No Sample | No Sample | No Sample | No Sample | No Sample | No Sample | No Sample | No Sample | No Sample |
| Alewife | No Sample | No Sample | No Sample | No Sample | No Sample | No Sample | No Sample | No Sample | No Sample | No Sample | No Sample |

Habitat Enhancement South Holston Reservoir

| Type of Work | Details | Quantity | |
|---------------------------------------------------------------|---------|----------|-----------|
| | | New | Renovated |
| No habitat work conducted on South Holston Reservoir in 2016. | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Water Quality Monitoring South Holston Reservoir

| Parameter | Sampling Period | Water Quality |
|------------------|-------------------|---------------|
| Temperature | July to September | normal |
| Dissolved Oxygen | July to September | normal |
| | | |

Tellico Reservoir - 2016

Description

Area: 16,056 acres

Shoreline: 357 miles

Counties: Monroe, Blount, Loudon

Full Pool Elevation (feet-msl): ~813

Winter Pool Elevation (feet-msl): ~807

Dam Completion: 1979

Lake-wide Angling Summary

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|------|------|-----------|-----------|------|-----------|------|-----------|-----------|
| Angling Pressure | | | | | | | | | | |
| Angler Hours | 190,448 | - | - | 132,151 | 112,382 | - | 147,269 | - | 109,693 | 135,910 |
| Angler Hours Per Acre | 11.5 | - | - | 8.0 | 6.8 | - | 8.9 | - | 6.6 | 8.2 |
| Angler Trips | 42,112 | - | - | 31,780 | 24,543 | - | 31,374 | - | 24,970 | 29,637 |
| Value of Fishery (angler expenditures creel) | | | | | | | | | | |
| All Species | \$679,630 | - | - | \$586,930 | \$497,340 | - | \$609,580 | - | \$422,800 | \$506,900 |

Black Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---------------------------------------------|-----------|------|------|-----------|-----------|------|-----------|------|-----------|-----------|
| Angling Pressure | | | | | | | | | | |
| All Black Bass (hrs) | 80,036 | - | - | 50,590 | 44,266 | - | 58,837 | - | 47,929 | 57,418 |
| All Black Bass (hrs/acre) | 4.98 | - | - | 3.15 | 2.76 | - | 3.66 | - | 2.90 | 3.48 |
| Any Black Bass (hrs) | 80,036 | - | - | 1,086 | 328 | - | 0 | - | 15,687 | 1,813 |
| Any Black Bass (hrs/acre) | 4.98 | - | - | 0.07 | 0.02 | - | 0.00 | - | 0.95 | 0.11 |
| Largemouth Bass (hrs) | 0 | - | - | 44,988 | 42,739 | - | 56,708 | - | 32,058 | 54,526 |
| Largemouth Bass (hrs/acre) | 0.00 | - | - | 2.80 | 2.66 | - | 3.53 | - | 1.94 | 3.30 |
| Smallmouth Bass (hrs) | 0 | - | - | 4,516 | 1,199 | - | 2,129 | - | 184 | 1,079 |
| Smallmouth Bass (hrs/acre) | 0.00 | - | - | 0.28 | 0.07 | - | 0.13 | - | 0.01 | 0.07 |
| Spotted Bass (hrs) | 0 | - | - | 0 | 0 | - | 0 | - | 0 | 0 |
| Spotted Bass (hrs/acre) | 0.00 | - | - | 0.00 | 0.00 | - | 0.00 | - | 0.00 | 0.00 |
| Value of Fishery (Trip Expenditures) | | | | | | | | | | |
| All Black Bass | \$389,330 | - | - | \$272,450 | \$218,140 | - | \$338,880 | - | \$240,030 | \$270,510 |
| Any Black Bass | \$389,330 | - | - | \$4,740 | \$1,810 | - | \$0 | - | \$89,740 | \$19,260 |
| Largemouth Bass | \$0 | - | - | \$242,470 | \$210,210 | - | \$328,930 | - | \$149,720 | \$244,330 |
| Smallmouth Bass | \$0 | - | - | \$25,240 | \$6,120 | - | \$9,950 | - | \$570 | \$6,920 |
| Spotted Bass | \$0 | - | - | \$0 | \$0 | - | \$0 | - | \$0 | \$0 |

Largemouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|-------|-------|------|-------|-------|------|-------|------|-------|-------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 15.00 | 11.30 | 4.00 | 8.67 | - | - | 6.33 | 3.67 | - | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | 65 | 57 | 72 | 65 | - | - | 62 | 61 | - | - |
| RSD (preferred) | 15 | 12 | 15 | 11 | - | - | 16 | 11 | - | - |
| CPUE (total) | 37.0 | 56.0 | 44.0 | 58.7 | - | - | 48.0 | 54.7 | - | - |
| CPUE ≥ Stock | 22.0 | 44.7 | 40.0 | 50.0 | - | - | 41.7 | 51.0 | - | - |
| CPUE ≥ MLL (14-inches) | 4.0 | 8.0 | 9.6 | 10.3 | - | - | 12.3 | 8.6 | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | 7.3 | - |
| Length Age-3 | - | - | - | - | - | - | - | - | 12.8 | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 80.4 | 80.1 | 77.7 | 81.5 | - | - | 78.9 | 76.7 | 81.8 | - |
| Quality | 80.2 | 80.8 | 78.4 | 79.7 | - | - | 78.8 | 81.1 | 85.2 | - |
| Preferred | 85.8 | 87.0 | 83.7 | 86.0 | - | - | 86.6 | 79.9 | 93.0 | - |
| Memorable | 87.6 | 86.7 | 85.6 | 88.1 | - | - | 90.4 | 96.6 | 99.3 | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | 35.0% | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | - | - | 0.72 | 0.96 | - | 0.92 | - | 1.21 | 1.23 |
| Harvest Rate (intended) | - | - | - | 0.03 | 0.01 | - | 0.05 | - | 0.01 | 0.00 |
| % Released | 98.2% | - | - | 97.3% | 98.9% | - | 96.3% | - | 98.2% | 99.5% |
| Mean Weight | 1.94 | - | - | 2.63 | 1.44 | - | 2.88 | - | 1.81 | 2.07 |

Smallmouth Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|--------|------|------|-------|--------|------|--------|------|--------|-------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 2.00 | 0.00 | 0.00 | 1.67 | - | - | 0.00 | 0.67 | - | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | 54 | 56 | 60 | 70 | - | - | 33 | 67 | - | - |
| RSD (preferred) | 23 | 11 | 47 | 26 | - | - | 17 | 17 | - | - |
| CPUE (preferred) | 1.0 | 0.3 | 2.4 | 1.7 | - | - | 0.7 | 0.3 | - | - |
| CPUE (memorable) | 0.0 | 0.0 | 0.0 | 0.7 | - | - | 0.0 | 0.0 | - | - |
| CPUE (trophy) | 0.0 | 0.0 | 0.4 | 0.0 | - | - | 0.0 | 0.0 | - | - |
| CPUE (total) | 6.3 | 3.0 | 6.0 | 10.7 | - | - | 4.0 | 2.7 | - | - |
| CPUE ≥ Stock | 4.3 | 3.0 | 6.0 | 9.0 | - | - | 4.0 | 2.0 | - | - |
| CPUE ≥ Preferred | 1.0 | 0.3 | 2.8 | 2.3 | - | - | 0.7 | 0.3 | - | - |
| CPUE ≥ MLL (18-inches) | 0.0 | 0.0 | 0.4 | 0.3 | - | - | 0.0 | 0.0 | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | 4.8 | - |
| Length Age-3 | - | - | - | - | - | - | - | - | 11.9 | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 79.8 | 75.3 | 76.3 | 76.2 | - | - | 80.6 | 78.7 | 76.5 | - |
| Quality | 82.1 | 71.0 | 84.7 | 80.8 | - | - | 81.3 | 77.3 | 74.8 | - |
| Preferred | 75.8 | - | 75.7 | 72.9 | - | - | 74.5 | 75.0 | 76.9 | - |
| Memorable | - | - | - | 78.3 | - | - | - | - | 81.6 | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | 34.0% | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | - | - | 0.43 | 0.41 | - | 0.41 | - | 1.20 | 0.54 |
| Harvest Rate (intended) | - | - | - | 0.00 | 0.00 | - | 0.00 | - | 0.00 | 0.00 |
| % Released | 100.0% | - | - | 99.4% | 100.0% | - | 100.0% | - | 100.0% | 98.1% |
| Mean Weight | - | - | - | 1.30 | - | - | - | - | - | 2.02 |

Spotted Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------------------|--------|------|------|--------|------|------|--------|------|------|--------|
| Recruitment (electrofishing) | | | | | | | | | | |
| Substock CPUE | 9.00 | 3.00 | 1.20 | 3.00 | - | - | 1.33 | 1.33 | - | - |
| Density (electrofishing) | | | | | | | | | | |
| PSD | 18 | 26 | 33 | 32 | - | - | 16 | 21 | - | - |
| RSD (preferred) | 1 | 1 | - | - | - | - | 5 | - | - | - |
| CPUE (total) | 38.7 | 35.7 | 18.4 | 21.7 | - | - | 7.7 | 9.3 | - | - |
| CPUE \geq Stock | 29.7 | 32.7 | 17.2 | 18.7 | - | - | 6.3 | 8.0 | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (spring electrofishing) | | | | | | | | | | |
| Stock | 82.5 | 88.2 | 86.0 | 88.3 | - | - | 87.6 | 84.9 | - | - |
| Quality | 76.4 | 80.1 | 79.3 | 84.0 | - | - | 77.2 | 78.4 | - | - |
| Preferred | 82.8 | 73.5 | - | - | - | - | 82.8 | - | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | - | - | - | - | - | - | - | - | - | - |
| Harvest Rate (intended) | - | - | - | - | - | - | - | - | - | - |
| % Released | 100.0% | - | - | 100.0% | - | - | 100.0% | - | - | 100.0% |
| Mean Weight | - | - | - | - | - | - | - | - | - | - |

Black Crappie

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|------|------|-----------|-----------|------|-----------|------|-----------|-----------|
| Density (electrofishing) | | | | | | | | | | |
| PSD | 100 | 50 | 100 | 100 | - | - | 93 | 100 | - | - |
| RSD (preferred) | 100 | 50 | 100 | 67 | - | - | 47 | 29 | - | - |
| CPUE (total) | 0.7 | 1.3 | 0.4 | 4.0 | - | - | 5.0 | 2.3 | - | - |
| CPUE \geq Stock | 0.7 | 1.3 | 0.4 | 4.0 | - | - | 5.0 | 2.3 | - | - |
| CPUE \geq MLL (10-inches) | 0.7 | 0.7 | 0.4 | 2.3 | - | - | 2.0 | 0.7 | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | - | - | - |
| Quality | - | - | - | 80.4 | - | - | 79.7 | 76.9 | - | - |
| Preferred | 78.9 | 79.0 | 84.5 | 79.9 | - | - | 79.9 | 80.4 | - | - |
| Memorable | - | 71.0 | - | 74.1 | - | - | 73.5 | 70.7 | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 63,333 | - | - | 56,778 | 50,778 | - | 53,193 | - | 42,261 | 45,225 |
| Angler Hours/Acre | 3.9 | - | - | 3.5 | 3.2 | - | 3.3 | - | 2.6 | 2.7 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 1.79 | - | - | 1.50 | 2.26 | - | 2.10 | - | 2.36 | 1.75 |
| Harvest Rate (any crappie) | 0.55 | - | - | 0.73 | 1.33 | - | 0.56 | - | 1.12 | 1.01 |
| % Released (black crappie) | 25.8% | - | - | 38.8% | 15.5% | - | 93.8% | - | 0.0% | - |
| Mean Weight (black crappie) | 0.73 | - | - | 1.33 | 1.10 | - | 1.33 | - | 1.04 | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | \$182,140 | - | - | \$227,760 | \$212,670 | - | \$180,740 | - | \$128,860 | \$150,840 |

White Crappie

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|-----------|------|------|-----------|-----------|------|-----------|------|-----------|-----------|
| Density (electrofishing) | | | | | | | | | | |
| PSD | 100 | 100 | 100 | 100 | - | - | 100 | 97 | - | - |
| RSD (preferred) | 78 | 44 | 100 | 75 | - | - | 33 | 26 | - | - |
| CPUE (total) | 3.0 | 11.3 | 0.8 | 17.7 | - | - | 19.3 | 25.3 | - | - |
| CPUE \geq Stock | 3.0 | 11.3 | 0.8 | 17.7 | - | - | 19.3 | 25.3 | - | - |
| CPUE \geq MLL (10-inches) | 1.7 | 5.0 | 0.8 | 11.3 | - | - | 5.3 | 4.0 | - | - |
| Growth (electrofishing) | | | | | | | | | | |
| Length Age-1 | - | - | - | - | - | - | - | - | - | - |
| Length Age-3 | - | - | - | - | - | - | - | - | - | - |
| Condition (electrofishing) | | | | | | | | | | |
| Stock | - | - | - | - | - | - | - | 87.9 | - | - |
| Quality | 82.6 | 79.1 | - | 83.4 | - | - | 82.1 | 77.8 | - | - |
| Preferred | 80.5 | 76.7 | 77.3 | 82.3 | - | - | 79.3 | 76.9 | - | - |
| Memorable | 76.9 | 78.1 | - | 77.6 | - | - | 78.4 | 92.9 | - | - |
| Mortality (electrofishing) | | | | | | | | | | |
| Total Mortality | - | - | - | - | - | - | - | - | - | - |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all crappie) | 63,333 | - | - | 56,778 | 50,778 | - | 53,193 | - | 42,261 | 45,225 |
| Angler Hours/Acre | 3.9 | - | - | 3.5 | 3.2 | - | 3.3 | - | 2.6 | 2.7 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any crappie) | 1.79 | - | - | 1.50 | 2.26 | - | 2.10 | - | 2.36 | 1.75 |
| Harvest Rate (any crappie) | 0.55 | - | - | 0.73 | 1.33 | - | 0.56 | - | 1.12 | 1.01 |
| % Released (w hite crappie) | 74.6% | - | - | 59.4% | 46.2% | - | 75.8% | - | 59.4% | 49.0% |
| Mean Weight (w hite crappie) | 0.69 | - | - | 1.14 | 1.10 | - | 1.10 | - | 0.83 | 0.79 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Crappie | \$182,140 | - | - | \$227,760 | \$212,670 | - | \$180,740 | - | \$128,860 | \$150,840 |

Walleye

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|----------|--------|--------|----------|----------|------|----------|---------|----------|---------|
| Stocking | | | | | | | | | | |
| # | 51,794 | 21,160 | 30,400 | 68,454 | 67,032 | 0 | 60,960 | 159,753 | 63,200 | 82,278 |
| #/Acre | 3.2 | 1.3 | 1.9 | 4.3 | 4.2 | 0.0 | 3.8 | 9.9 | 3.8 | 5.0 |
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | 2,523 | - | - | 4,850 | 1,908 | - | 5,128 | - | 2,700 | 1,491 |
| Angler Hours/Acre | 0.2 | - | - | 0.3 | 0.1 | - | 0.3 | - | 0.2 | 0.1 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0.17 | - | - | 0.23 | 0.00 | - | 0.12 | - | 0.03 | 0.00 |
| Harvest Rate (intended) | 0.02 | - | - | 0.11 | 0.00 | - | 0.05 | - | 0.02 | 0.00 |
| % Released | 81.5% | - | - | 48.6% | - | - | 54.3% | - | 66.7% | - |
| Mean Weight | 4.08 | - | - | 3.35 | - | - | 3.41 | - | 3.65 | - |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Walleye | \$13,310 | - | - | \$33,790 | \$12,260 | - | \$31,580 | - | \$12,970 | \$7,720 |

Striped Bass

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|---------|------|------|---------|----------|------|---------|------|---------|----------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours | 983 | - | - | 1,329 | 1,712 | - | 866 | - | 184 | 2,354 |
| Angler Hours/Acre | 0.1 | - | - | 0.1 | 0.1 | - | 0.1 | - | 0.0 | 0.1 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (intended) | 0.23 | - | - | 0.00 | 0.30 | - | 0.00 | - | 0.00 | 0.23 |
| Harvest Rate (intended) | 0.00 | - | - | 0.00 | 0.00 | - | 0.00 | - | 0.00 | 0.04 |
| % Released | 98.9% | - | - | 100.0% | 100.0% | - | - | - | 100.0% | 78.4% |
| Mean Weight | 3.15 | - | - | - | - | - | - | - | - | 18.94 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| Striped Bass | \$3,890 | - | - | \$7,870 | \$27,930 | - | \$4,410 | - | \$1,510 | \$21,730 |

Sunfish

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|---------|------|------|---------|---------|------|-------|------|---------|---------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all sunfish) | 1,553 | - | - | 1,314 | 390 | - | - | - | 2,404 | 2,927 |
| Angler Hours/Acre | 0.1 | - | - | 0.1 | 0.0 | - | - | - | 0.1 | 0.2 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any sunfish) | 2.73 | - | - | 1.89 | 1.63 | - | - | - | 4.28 | 2.69 |
| Harvest Rate (any sunfish) | 0.63 | - | - | 0.73 | 0.89 | - | - | - | 1.89 | 1.40 |
| % Released (bluegill) | 86.9% | - | - | 62.9% | 88.7% | - | 84.4% | - | 58.7% | 54.5% |
| Mean Weight (bluegill) | 0.49 | - | - | 0.51 | 0.69 | - | 0.56 | - | 0.55 | 0.50 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Sunfish | \$3,080 | - | - | \$4,900 | \$1,250 | - | - | - | \$8,610 | \$7,280 |

Catfish

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|-----------------------------------------------------|---------|------|------|---------|---------|------|-------|------|--------|---------|
| Angling Pressure (creel) | | | | | | | | | | |
| Angler Hours (all catfish) | 940 | - | - | 323 | 791 | - | 723 | - | - | 1,139 |
| Angler Hours/Acre | 0.1 | - | - | 0.0 | 0.0 | - | 0.0 | - | - | 0.1 |
| Fishing Success (creel) | | | | | | | | | | |
| Catch Rate (any catfish) | 0.00 | - | - | 0.00 | 0.00 | - | 0.00 | - | - | 0.13 |
| Harvest Rate (any catfish) | 0.00 | - | - | 0.00 | 0.00 | - | 0.00 | - | - | 0.13 |
| % Released (channel) | - | - | - | 0.0% | 22.4% | - | - | - | 100.0% | 100.0% |
| Mean Weight (channel) | - | - | - | 5.20 | 2.47 | - | - | - | - | 41.60 |
| | | | | | | | | | | 3.95 |
| Value of Fishery (Trip Expenditures - creel) | | | | | | | | | | |
| All Catfish | \$3,210 | - | - | \$1,110 | \$3,570 | - | \$820 | - | - | \$2,080 |

Habitat Enhancement

| Type of Work | Details | Quantity | |
|--------------|---------|----------|-----------|
| | | New | Renovated |
| Rebrush | none | none | none |

Watauga Reservoir

Description

| | |
|-------------------------------------------------------------|-----------------------------------------------------|
| Surface Area: 6,430 acres | Shoreline Distance: 105 miles |
| Counties: Carter, Johnson | Drainage Area: 468 square miles |
| Full Pool Elevation: 1,959 feet above mean sea level | Mean Annual Fluctuation: 44 feet |
| Maximum Depth: 312 feet | Thermocline Depth: 30 feet |
| Mean Chlorophyll (Forebay): 4.0 parts per million | Shoreline Development: 21% |
| Trophic Status (Forebay): Mesotrophic | Trophic Index, Carlson (1977): 44.3 |
| Hydraulic Retention Time: 400 days | Reservoir Age: 68 years (dam completed 1948) |
| Total Fishing Effort: 118,002 hours | Total Value by Anglers: \$314,280 |

Summary:

Electrofishing

Electrofishing was conducted on Watauga Reservoir in April 2016. The largemouth bass catch rates for Watauga Reservoir were slightly below average in 2016 at 17.0 fish/hour. However, a PSD value of 98 would indicate that the reservoir size structure is dominated by larger fish. There was also a good percentage of largemouth bass collected over the 12-inch MLL. Largemouth bass relative weights were about average for Watauga Reservoir.

Smallmouth bass catch rates were above average at about 25.6 fish /hour. There was also a large percentage of fish collected over the 15-inch MLL (71%). Smallmouth bass relative weights were about average for Watauga Reservoir.

Gill Netting

There was no gill netting conducted on South Holston Reservoir in 2016.

Trap Netting

There was no trap netting conducted on South Holston Reservoir in 2016.

Habitat Enhancement

There was no habitat enhancement on South Holston Reservoir in 2016.

Water Quality

Water quality samples were collected at two sites on Watauga Reservoir during July, August, and September 2016. The results from these samples were normal for South Holston Reservoir.

Lakewide Angling Summary**Total Effort and Expenditures**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|----------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Angling Pressure | | | | | | | | | | |
| Angler Hours | no survey | no survey | no survey | no survey | no survey | 178,182 | no survey | no survey | no survey | 118,002 |
| Angler Hours Per Acre | no survey | no survey | no survey | no survey | no survey | 27.7 | no survey | no survey | no survey | 18.3 |
| Angler Trips | no survey | no survey | no survey | no survey | no survey | 28,756 | no survey | no survey | no survey | 20,798 |
| Value of Fishery (angler expenditures creel) | | | | | | | | | | |
| All Species | no survey | no survey | no survey | no survey | no survey | \$537,020 | no survey | no survey | no survey | \$314,280 |

Black Bass, Watauga Reservoir**Black Bass**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|---------------------------------------------|------|--------|------|------|------|---------|------|------|------|--------|--------|
| Angling Pressure (creel survey data) | | | | | | | | | | | |
| All Black Bass (hrs) | | 64,427 | | | | 109,880 | | | | 80,378 | 84,895 |
| (hrs/acre) | N | 10.0 | N | N | N | 17.1 | N | N | N | 12.5 | 13.2 |
| | o | | o | o | o | | o | o | o | | |
| Any Black Bass (hrs) | | 62,941 | | | | 96,492 | | | | 74,131 | 77,855 |
| (hrs/acre) | S | 9.8 | S | S | S | 15.0 | S | S | S | 11.5 | 12.1 |
| | u | | u | u | u | | u | u | u | | |
| Largemouth Bass (hrs) | | 360 | | | | 1,460 | | | | 1,401 | 1,074 |
| (hrs/acre) | r | 0.1 | r | r | r | 0.2 | r | r | r | 0.2 | 0.2 |
| | v | | v | v | v | | v | v | v | | |
| Smallmouth Bass (hrs) | | 1,126 | | | | 11,698 | | | | 2,648 | 5,157 |
| (hrs/acre) | e | 0.2 | e | e | e | 1.8 | e | e | e | 0.4 | 0.8 |
| | y | | y | y | y | | y | y | y | | |
| Spotted Bass (hrs) | | 0 | | | | 2,330 | | | | 2,198 | 1,509 |
| (hrs/acre) | | 0.0 | | | | 0.4 | | | | 0.3 | 0.2 |

Tournaments (BITE program & creel survey data)

| | | | | | | | | | | | |
|--------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| # Tournaments (BITE) | none reported | none reported | none reported | none reported | none reported | none reported | none reported | none reported | none reported | none reported | none reported |
| Pounds/Angler Day (BITE) | | | | | | | | | | | |
| Bass/Angler Day (BITE) | | | | | | | | | | | |

Value of Fishery (creel survey data - trip expenditures)

| | | | | | | | | | | | |
|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| All Black Bass | | \$259,440 | | | | \$368,410 | | | | \$251,040 | \$175,778 |
| Any Black Bass | | \$254,040 | | | | \$321,660 | | | | \$235,140 | \$270,280 |
| Largemouth Bass | No Survey | \$4,320 | No Survey | No Survey | No Survey | \$1,700 | No Survey | No Survey | No Survey | \$3,460 | \$3,160 |
| Smallmouth Bass | | \$1,080 | | | | \$37,240 | | | | \$8,620 | \$15,647 |
| Spotted Bass | | \$0 | | | | \$7,810 | | | | \$3,820 | \$3,877 |

Largemouth Bass, Watauga Reservoir

| Largemouth Bass | | | | | | | | | | | |
|-----------------------------------------------------------|--------|------|--------|--------|--------|------|--------|--------|-----------|-------|------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
| Recruitment (electrofishing data) | | | | | | | | | | | |
| Age-1 CPUE | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A |
| Substock CPUE | 0.8 | 0.6 | 1.0 | 0.6 | 1.0 | 0.4 | 0.8 | 0.6 | no survey | 1.0 | 0.8 |
| Density (electrofishing data - CPUE = # fish/hour) | | | | | | | | | | | |
| PSD | 82% | 94% | 91% | 91% | 92% | 89% | 76% | 86% | no survey | 98% | 89% |
| RSD - Preferred | 55% | 75% | 68% | 65% | 78% | 61% | 55% | 61% | no survey | 80% | 66% |
| CPUE | 20.0 | 21.2 | 23.0 | 20.2 | 22.0 | 20.8 | 14.0 | 11.8 | no survey | 17.0 | 18.9 |
| CPUE ≥ Stock | 19.2 | 20.6 | 22.0 | 19.6 | 21.0 | 20.4 | 13.2 | 11.2 | no survey | 16.0 | 18.1 |
| CPUE ≥ MSL (12") | 15.6 | 19.4 | 20.0 | 17.6 | 19.0 | 17.4 | 9.6 | 9.0 | no survey | 15.6 | 15.9 |
| Growth (electrofishing data) | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A |
| Mean TL at Age-3 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A |
| Relative Weight (electrofishing data) | | | | | | | | | | | |
| Stock - Quality | 84.2 | 86.4 | 83.7 | 86.5 | 83.5 | 81.3 | 83.8 | 86.6 | no survey | 79.8 | 84.0 |
| Quality - Preferred | 91.2 | 88.3 | 89.4 | 87.5 | 97.7 | 95.2 | 92.3 | 91.8 | no survey | 91.1 | 91.6 |
| Preferred - Memorable | 93.6 | 95.5 | 95.9 | 94.3 | 100.5 | 99.6 | 95.2 | 90.0 | no survey | 93.4 | 95.3 |
| Memorable - Trophy | 97.5 | 97.8 | 94.7 | 94.7 | 102.0 | 95.6 | 96.1 | 96.0 | no survey | 101.9 | 97.4 |
| Trophy | none | none | none | none | none | none | none | none | no survey | none | none |
| Mortality (electrofishing data) | | | | | | | | | | | |
| Total Mortality | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Fishing Success (creel survey data) | | | | | | | | | | | |
| Catch Rate | No | 0.13 | No | No | No | 0.14 | No | No | No | 0.21 | 0.16 |
| Harvest Rate | | 0.01 | | | | 0.00 | | | | 0.00 | 0.00 |
| Percent Harvested | Survey | 6.3% | Survey | Survey | Survey | 1.0% | Survey | Survey | Survey | 0.6% | 2.6% |
| Mean Weight (pounds) | | 2.29 | | | | 2.90 | | | | 2.87 | 2.69 |

Smallmouth Bass, Watauga Reservoir

| Smallmouth Bass | | | | | | | | | | | |
|-----------------------------------------------------------|--------|------|--------|--------|--------|------|--------|--------|-----------|------|------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
| Recruitment (electrofishing data) | | | | | | | | | | | |
| Age-1 CPUE | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A |
| Substock CPUE | 3.8 | 0.6 | 1.0 | 1.6 | 0.2 | 0.6 | 0.4 | 0.6 | no survey | 0.8 | 1.1 |
| Density (electrofishing data - CPUE = # fish/hour) | | | | | | | | | | | |
| PSD | 66% | 87% | 85% | 84% | 94% | 99% | 87% | 91% | no survey | 96% | 88% |
| RSD - Preferred | 47% | 56% | 60% | 78% | 80% | 90% | 81% | 69% | no survey | 88% | 72% |
| CPUE | 28.2 | 30.8 | 24.6 | 11.8 | 31.8 | 21.0 | 16.0 | 14.0 | no survey | 25.6 | 22.6 |
| CPUE ≥ Stock | 24.4 | 30.2 | 23.6 | 10.2 | 31.6 | 20.4 | 15.6 | 13.4 | no survey | 24.8 | 21.6 |
| CPUE ≥ MSL (15")* | 14.6 | 8.2 | 8.8 | 6.2 | 20.0 | 14.8 | 11.0 | 7.4 | no survey | 17.2 | 12.0 |
| Growth (electrofishing data) | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A |
| Mean TL at Age-3 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A |
| Relative Weight (electrofishing data) | | | | | | | | | | | |
| Stock - Quality | 82.1 | 84.6 | 90.2 | 85.5 | 84.9 | 85.9 | 95.2 | 76.9 | no survey | 87.4 | 85.9 |
| Quality - Preferred | 83.1 | 86.8 | 91.5 | 84.8 | 90.9 | 86.5 | 88.6 | 89.2 | no survey | 91.6 | 88.1 |
| Preferred - Memorable | 86.6 | 88.1 | 84.5 | 86.3 | 93.3 | 89.8 | 86.3 | 82.9 | no survey | 87.2 | 87.2 |
| Memorable - Trophy | 84.3 | 86.3 | 84.1 | 82.6 | 93.4 | 88.7 | 86.3 | 78.8 | no survey | 83.8 | 85.4 |
| Trophy | none | none | none | none | none | none | none | none | no survey | none | none |
| Mortality (electrofishing data) | | | | | | | | | | | |
| Total Mortality | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Fishing Success (creel survey data) | | | | | | | | | | | |
| Catch Rate | No | 0.24 | No | No | No | 0.34 | No | No | No | 0.23 | 0.27 |
| Harvest Rate | | 0.01 | | | | 0.02 | | | | 0.01 | 0.01 |
| Percent Harvested | Survey | 5.7% | Survey | Survey | Survey | 6.5% | Survey | Survey | Survey | 3.5% | 5.2% |
| Mean Weight (pounds) | | 2.72 | | | | 3.66 | | | | 2.67 | 3.02 |

* 18" MLL in effect in 2008, 18" in 2009, and 15" in 2010

Data in this table are for regular daytime electrofishing samples and NOT SMB targeted shock, even though those data are in the database

Spotted Bass, Watauga Reservoir

| Spotted Bass | | | | | | | | | | | |
|----------------------------------------------------|-------------------------------------|-------|--------|--------|--------|-------|--------|--------|-----------|-------|-------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
| Recruitment (electrofishing data) | | | | | | | | | | | |
| Substock CPUE | 0.00 | 1.00 | 2.00 | 0.80 | 0.20 | 1.20 | 1.40 | 0.80 | no survey | 2.00 | 1.04 |
| Density (electrofishing data - CPUE = # fish/hour) | | | | | | | | | | | |
| PSD | 82% | 49% | 57% | 60% | 74% | 99% | 68% | 76% | no survey | 65% | 70% |
| RSD - Preferred | 29% | 7% | 14% | 26% | 37% | 90% | 19% | 21% | no survey | 41% | 32% |
| CPUE | 3.4 | 16.2 | 16.8 | 14.8 | 15.8 | 15.0 | 12.8 | 14.8 | no survey | 21.4 | 14.6 |
| CPUE ≥ Stock | 3.4 | 15.2 | 14.8 | 14.0 | 15.6 | 13.8 | 11.4 | 14.0 | no survey | 19.4 | 13.5 |
| CPUE ≥ MSL | N o M i n i m u m S i z e L i m i t | | | | | | | | | | |
| Relative Weight (electrofishing data) | | | | | | | | | | | |
| Stock - Quality | 96.4 | 98.7 | 100.9 | 94.3 | 99.6 | 96.1 | 103.8 | 104.5 | no survey | 94.5 | 98.8 |
| Quality - Preferred | 95.0 | 95.4 | 95.0 | 95.6 | 103.6 | 99.0 | 104.5 | 102.4 | no survey | 95.5 | 98.4 |
| Preferred - Memorable | 115.8 | 102.3 | 104.1 | 103.4 | 113.2 | 105.6 | 105.0 | 99.5 | no survey | 100.3 | 105.5 |
| Memorable - Trophy | none | none | none | 124.0 | none | none | none | none | no survey | 114.0 | 119.0 |
| Trophy | none | none | none | none | none | none | none | none | no survey | none | none |
| Fishing Success (creel survey data) | | | | | | | | | | | |
| Catch Rate | No | 0.15 | No | No | No | 0.34 | No | No | No | 0.3 | 0.26 |
| Harvest Rate | | 0.04 | | | | 0.03 | | | | 0.0 | 0.03 |
| Percent Harvested | Survey | 27.5% | Survey | Survey | Survey | 10.1% | Survey | Survey | Survey | 10.4% | 16.0% |
| Mean Weight (pounds) | | 1.23 | | | | 1.52 | | | | 1.60 | |

Black Crappie, Watauga Reservoir

| Black Crappie | | | | | | | | | | | |
|----------------------------------------------------------------|------|---------|-------|-------|------|---------|-------|-------|-----------|---------|---------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
| Recruitment (electrofishing data) - CPUE = # fish/ hour | | | | | | | | | | | |
| Age-0 CPUE | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A |
| Substock CPUE | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | no survey | 0.00 | 0.00 |
| Density (electrofishing data) - CPUE = # fish/ hour | | | | | | | | | | | |
| PSD | none | none | 100% | 100% | 89% | 100% | 86% | 86% | no survey | 91% | 93% |
| RSD - Preferred | none | none | 33% | 71% | 56% | 93% | 86% | 57% | no survey | 55% | 64% |
| CPUE | 0.00 | 0.00 | 0.60 | 1.40 | 1.80 | 2.80 | 2.80 | 1.40 | no survey | 2.20 | 1.44 |
| CPUE ≥ Stock | 0.00 | 0.00 | 0.60 | 1.40 | 1.80 | 2.80 | 2.80 | 1.40 | no survey | 2.20 | 1.44 |
| CPUE ≥ MSL (10") | 0.00 | 0.00 | 0.20 | 0.80 | 1.00 | 2.40 | 2.40 | 0.80 | no survey | 1.20 | 0.98 |
| Growth (electrofishing data) | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A |
| Mean TL at Age-3 (mm) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | no survey | N/A | N/A |
| Relative Weight (electrofishing data) | | | | | | | | | | | |
| Stock - Quality | none | none | none | none | 90.7 | none | 91.8 | 100.7 | no survey | 98.1 | 95.3 |
| Quality - Preferred | none | none | 98.7 | 96.1 | 94.2 | 78.0 | 89.3 | 92.3 | no survey | 92.1 | 91.5 |
| Preferred - Memorable | none | none | 53.8 | 93.6 | 83.9 | 87.6 | 88.7 | 105.4 | no survey | 82.5 | 85.1 |
| Memorable - Trophy | none | none | none | 85.0 | 86.0 | 95.3 | none | 92.0 | no survey | 88.1 | 89.3 |
| Trophy | none | none | none | none | none | none | none | none | no survey | none | none |
| Mortality (electrofishing data) | | | | | | | | | | | |
| Total Mortality | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Stocking | | | | | | | | | | | |
| # per Acre | 0.0 | 10.0 * | 8.1 * | 4.9 * | 0.0 | 4.9 * | 6.6 * | 5.3 * | 4.7 * | 4.9 * | 4.9 |
| Angling Pressure (creel survey data - any crappie) | | | | | | | | | | | |
| Angler Hours | N | 1,821 | N | N | N | 3,245 | N | N | N | 2,785 | 2,617 |
| Angler Hours/Acre | - | 0.3 | o | o | o | 0.5 | o | o | o | 0.4 | 0.1 |
| Fishing Success (creel survey data) | | | | | | | | | | | |
| Catch Rate | S | 0.00 | S | S | S | 0.58 | S | S | S | 0.56 | 0.38 |
| Harvest Rate | u | 0.00 | u | u | u | 0.32 | u | u | u | 0.40 | 0.24 |
| Percent Harvested | r | none | r | r | r | 57.8% | r | r | r | 76.7% | 67.3% |
| Mean Weight (pounds) | v | none | v | v | v | 1.13 | v | v | v | 2.05 | 1.59 |
| Value of Fishery (creel survey data - trip expenditure) | | | | | | | | | | | |
| Any Crappie | y | \$2,080 | y | y | y | \$6,790 | y | y | y | \$7,620 | \$5,497 |

* Black and Blacknose Crappie

Walleye, Watauga Reservoir

| Walleye | | | | | | | | | | | |
|-----------------------------------------------------------------|------|----------------|-------|-------|------|----------------|-------|--------|------|----------------|----------------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
| Recruitment (winter gill net data) | | | | | | | | | | | |
| Substock CPUE | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.20 | 0.00 | No Survey | 0.02 |
| Density (winter gill net data - CPUE = # fish/net night) | | | | | | | | | | | |
| PSD | 95% | 82% | 90% | 100% | 92% | 100% | 93% | 92% | 89% | No Survey | 93% |
| RSD - Preferred | 38% | 43% | 34% | 29% | 42% | 43% | 57% | 38% | 37% | No Survey | 40% |
| CPUE | 9.43 | 12.30 | 22.29 | 4.67 | 17.7 | 7.7 | 17.8 | 12.30 | 6.3 | No Survey | 12.3 |
| CPUE ≥ Stock | 9.43 | 12.25 | 22.29 | 4.67 | 17.7 | 7.7 | 17.8 | 12.20 | 6.3 | No Survey | 12.3 |
| CPUE ≥ MSL (18") | 5.14 | 9.00 | 9.00 | 4.08 | 11.7 | 5.7 | 15.0 | 6.30 | 3.7 | No Survey | 7.7 |
| Growth (winter gill net data) | | | | | | | | | | | |
| Mean TL at Age-1 (mm) | 429 | 431 | 416 | 409 | 405 | No | 399 | No | 413 | No Survey | 415 |
| Mean TL at Age-3 (mm) | 485 | 534 | 537 | none | 517 | Sample | 505 | Sample | none | No Survey | 515.6 |
| Relative Weight (winter gill net data) | | | | | | | | | | | |
| Stock - Quality | 98.4 | 93.3 | 97.0 | none | 96.7 | none | 102.4 | 103.3 | 99.5 | No Survey | 98.7 |
| Quality - Preferred | 93.0 | 96.6 | 95.6 | 99.2 | 95.4 | 98.6 | 99.3 | 96.3 | 93.7 | No Survey | 96.4 |
| Preferred - Memorable | 93.1 | 94.2 | 95.4 | 102.4 | 94.5 | 97.6 | 95.2 | 97.3 | 95.8 | No Survey | 96.2 |
| Memorable - Trophy | 87.7 | 90.4 | 91.1 | 89.9 | 81.1 | 92.6 | 91.7 | 147.7 | 91.9 | No Survey | 96.0 |
| Trophy | none | none | none | none | none | none | none | none | none | No Survey | none |
| Mortality (winter gill net data) | | | | | | | | | | | |
| Total Mortality | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Stocking | | | | | | | | | | | |
| # per Acre | 5.5 | 6.4 | 7.4 | 6.5 | 0.0 | 0.0 | 4.7 | 5.5 | 9.5 | 10.4 | 5.6 |
| Angling Pressure (creel survey data) | | | | | | | | | | | |
| Angler Hours | N | 13,148 | N | N | N | 8,569 | N | N | N | 7,724 | 9,814 |
| Angler Hours/Acre | | 2.04 | o | o | o | 1.30 | o | o | o | 1.20 | 1.53 |
| Fishing Success (creel survey data) | | | | | | | | | | | |
| Catch Rate | S | not calculated | S | S | S | not calculated | S | S | S | not calculated | not calculated |
| Harvest Rate | u | not calculated | u | u | u | not calculated | u | u | u | not calculated | not calculated |
| Percent Harvested | r | 71.6% | r | r | r | 88.0% | r | r | r | 32.3% | 64.0% |
| Mean Weight (pounds) | v | 3.85 | v | v | v | 4.65 | v | v | v | 5.27 | 4.59 |
| Value of Fishery (creel survey data - trip expenditure) | | | | | | | | | | | |
| Walleye Data Only | y | \$47,990 | y | y | y | \$37,360 | y | y | y | \$10,830 | \$32,060 |

Trout, Watauga Reservoir

| Trout | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|-----------------------------------------------------------------|------------|--------|----------|--------|--------|--------|----------|--------|--------|--------|----------|----------|
| Angling Pressure (creel survey data) | | | | | | | | | | | | |
| All Trout | (hrs) | N | 34,101 | N | N | N | 32,262 | N | N | N | 19,172 | 28,512 |
| | (hrs/acre) | O | 5.3 | O | O | O | 5.0 | O | O | O | 3.0 | 4.4 |
| Any Trout | (hrs) | | 28,146 | | | | 13,308 | | | | 5,412 | 15,622 |
| | (hrs/acre) | | 4.4 | | | | 2.1 | | | | 0.8 | 2.4 |
| Rainbow Trout | (hrs) | S | 558 | S | S | S | 7,579 | S | S | S | 1,350 | 3,162 |
| | (hrs/acre) | U | 0.1 | U | U | U | 1.2 | U | U | U | 0.2 | 0.5 |
| Brown Trout | (hrs) | r | 0 | r | r | r | 0 | r | r | r | 0 | 0 |
| | (hrs/acre) | v | 0.0 | v | v | v | 0.0 | v | v | v | 0.0 | 0.0 |
| Lake Trout | (hrs) | e | 5,397 | e | y | y | 11,375 | y | y | y | 5,084 | 7,285 |
| | (hrs/acre) | y | 0.8 | y | | | 1.8 | | | | 0.8 | 1.1 |
| Value of Fishery (creel survey data - trip expenditures) | | | | | | | | | | | | |
| All Trout | | | \$91,220 | | | | \$81,890 | | | | \$18,150 | \$63,753 |
| Any Trout | | No | \$64,770 | No | No | No | \$52,130 | No | No | No | \$12,550 | \$43,150 |
| Rainbow Trout | | Survey | \$720 | Survey | Survey | Survey | \$5,110 | Survey | Survey | Survey | \$1,990 | \$2,607 |
| Brown Trout | | | \$0 | | | | \$0 | | | | \$0 | \$0 |
| Lake Trout | | | \$25,730 | | | | \$24,650 | | | | \$3,610 | \$17,997 |

Lake Trout, Watauga Reservoir

| Lake Trout | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|--------------------------------------------|--------|----------------|--------|--------|--------|----------------|--------|--------|--------|----------------|----------------|------|
| Fishing Success (creel survey data) | | | | | | | | | | | | |
| Catch Rate | No | not calculated | No | No | No | not calculated | No | No | No | not calculated | not calculated | |
| Harvest Rate | | not calculated | | | | not calculated | | | | not calculated | not calculated | |
| Percent Harvested | Survey | 64.7% | Survey | Survey | Survey | 38.3% | Survey | Survey | Survey | 85.6% | 62.9% | |
| Mean Weight (pounds) | | 3.09 | | | | 2.88 | | | | | 5.1 | 3.69 |

Sunfish, Watauga Reservoir

| Sunfish | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
|-----------------------------------------------------------------|---|-------|----------|------|------|-------|---------|------|------|------|---------|----------|
| Angling Pressure (creel survey data - any sunfish) | | | | | | | | | | | | |
| Angler Hours | N | 5,821 | N | N | N | 5,820 | N | N | N | | 6,181 | 5,941 |
| Angler Hours/Acre | | 0.91 | | O | O | 0.90 | O | O | O | | 0.96 | 0.92 |
| Fishing Success (creel survey data - bluegill only) | | | | | | | | | | | | |
| Catch Rate (bluegill) | S | 2.40 | S | S | S | 1.77 | S | S | S | | 1.68 | 1.95 |
| Harvest Rate (bluegill) | U | 0.42 | U | U | U | 0.00 | U | U | U | | 0.33 | 0.25 |
| % Harvested (bluegill) | r | 7.5% | r | r | r | 1.9% | r | r | r | | 10.6% | 6.7% |
| Mean Weight (bluegill) | v | 0.20 | v | v | v | 0.25 | v | v | v | | 0.30 | 0.25 |
| Value of Fishery (creel survey data - trip expenditures) | | | | | | | | | | | | |
| Any Sunfish | | | \$21,080 | | y | y | \$6,520 | y | y | y | \$6,870 | \$11,490 |

Catfish, Watauga Reservoir

| Catfish | | | | | | | | | | | |
|-----------------------------------------------------------------|------|---------|------|------|------|----------------|------|------|------|---------|---------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Mean |
| Angling Pressure (creel survey data - any catfish) | | | | | | | | | | | |
| Angler Hours | N | 2,222 | N | N | N | not calculated | N | N | N | 1,141 | 1,682 |
| Angler Hours/Acre | ^ | 0.35 | o | o | o | not calculated | o | o | o | 0.17 | 0.06 |
| Fishing Success (creel survey data) | | | | | | | | | | | |
| Catch Rate (channel cat) | S | 0.22 | S | S | S | not calculated | S | S | S | 1.87 | 1.05 |
| Harvest Rate (channel cat) | u | 0.10 | u | u | u | not calculated | u | u | u | 1.20 | 0.65 |
| % Harvested (channel cat) | r | 43.3% | r | r | r | 16.2% | r | r | r | 59.4% | 39.6% |
| Mean Weight (channel cat) | v | 2.98 | v | v | v | 4.56 | v | v | v | 3.98 | 3.84 |
| Value of Fishery (creel survey data - trip expenditures) | | | | | | | | | | | |
| Any Catfish | y | \$4,060 | y | y | y | not calculated | y | y | y | \$6,740 | \$5,400 |

Habitat Enhancement Watauga Reservoir

| Type of Work | Details | Quantity | |
|---------------------------------------|---------|----------|-----------|
| | | New | Renovated |
| *No Habitat Enhancement work in 2016. | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Water Quality Monitoring Watauga Reservoir

| Parameter | Sampling Period | Water Quality |
|------------------|-------------------|---------------|
| Temperature | July to September | normal |
| Dissolved Oxygen | July to September | normal |
| | | |

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Glossary

Biomass: weight of species or group of species expressed in pounds per acre or kilograms per hectare

Catch-Curve: a graph representing the relative abundance of various year-classes of a fish species. Used to measure the total mortality effecting the various year-classes present in the population.

Density: The abundance of fish in a population measured through catch-per-unit of effort. E.g. bass density is measured in number of fish caught per hour of electrofishing.

Exploitation: fish harvested or removed from the population by the fisherman. Measured through creel survey trends and catch-curve analysis.

Florida Bass: a subspecies of largemouth bass (*Micropterus salmoides floridanus*) native to the lower Florida peninsula. Desired for their ability to obtain relatively large sizes and advanced ages.

Growth: change in fish length with time. Measured as the average length of the fish at each age or length at which it enters the fishery (mean length of Age 3 bass).

Interspecific competition: Competition between two or more species for food or space when (and only when) either is limited.

Memorable-Size: The size when fish become memorable to catch (e.g. 20-25" for largemouth bass).

Mortality: removal of fish from the population by death, either by natural causes or harvest by a fisherman. Total mortality is a combination of both factors, and is indirectly assessed with Proportional and Relative Stock Density indices. Fishing mortality alone is measured by exploitation studies for creel census surveys.

Preferred-size: The size preferred by most fishermen to catch. (e.g. 15"-20" for largemouth bass).

Proportional Stock Density: an index that expresses the proportion of quality-sized fish to stock size fish. Used as an indirect measure of total mortality.

Quality Size: The size at which most fishermen begin to keep fish of a particular species (12"-15" for largemouth bass).

Recruitment: number of fish spawned that survived to be captured by a particular sampling gear. (e.g. for bass it is measured as the number of Age 1 bass in spring electrofishing; Crappie – number of age 0 collected with fall trapnettings).

Relative Stock Density: an index that expresses the proportion of preferred-size fish to stock size fish.

Stock Size: The age 1 and age 2 fish that will grow replace larger fish that are removed by fishing or natural death.

Year-class: a species group spawned in the same year.

Young of the Year (YOY): Fish produced during the current with an assumed birthdate of January 1. Also referred to as Age-0 fish.